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OUP India
Higher Education

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CURRICULUM-BASED TEXTBOOKS & RESOURCES

PRESCRIBED BY UNIVERSITIES & RECOMMENDED BY TEACHERS



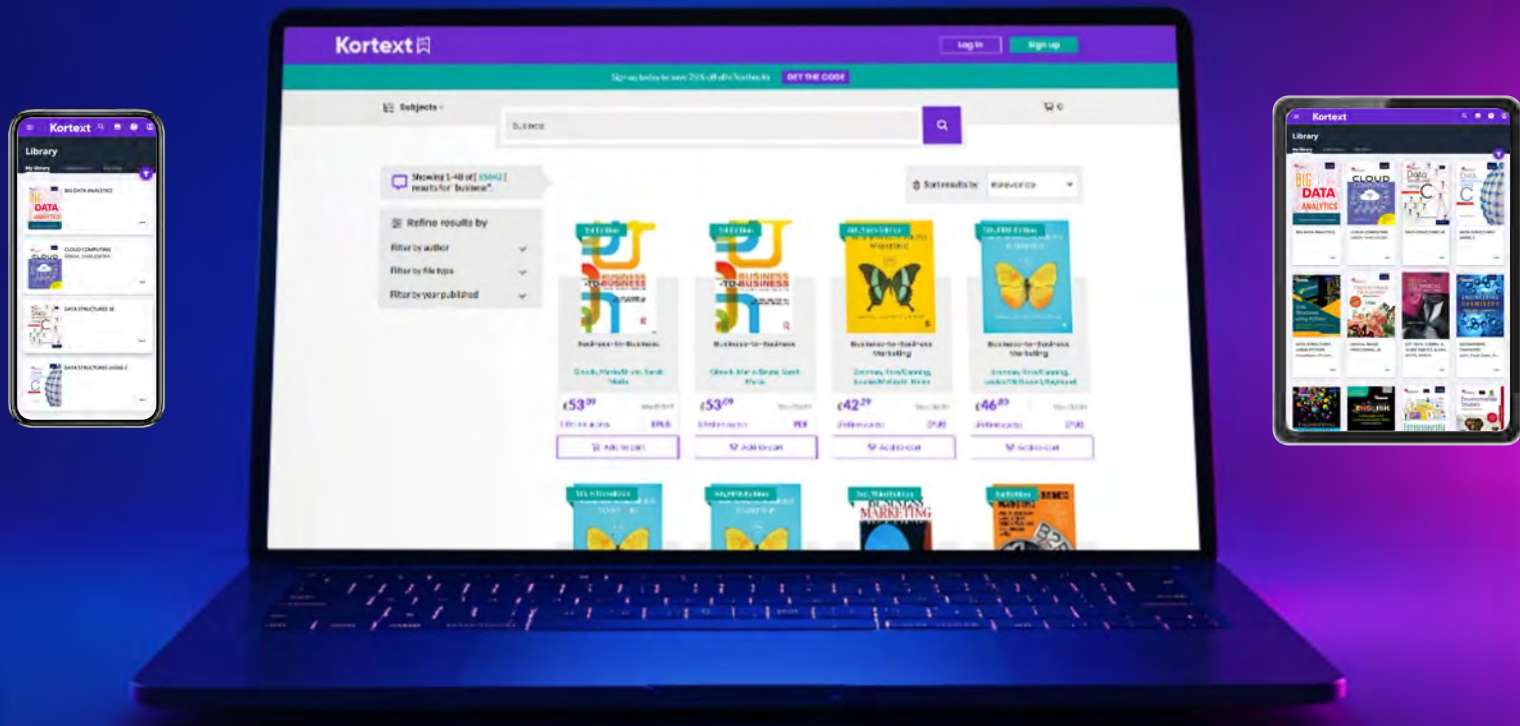
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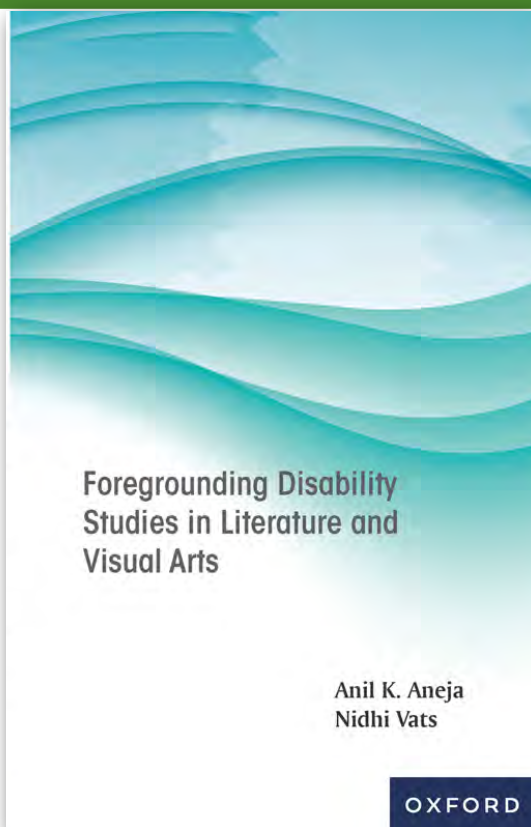
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ANTHOLOGY



Foregrounding Disability Studies in Literature and Visual Arts

Anil K. Aneja
Nidhi Vats

OXFORD

Foregrounding Disability Studies in Literature and Visual Arts

This groundbreaking volume undertakes an in-depth exploration of literary and visual artworks through the disability studies lens, focusing on works often overlooked in this context. While recognizing existing scholarship, this anthology seeks to fill a crucial gap by presenting comprehensive, India-centred analyses of disability representations across diverse media. Through a rich tapestry of perspectives, the book challenges the notion of disability as a universal and static category, instead examining individual diversities and nuanced intersections with race, gender, sexuality, and class to reveal multifaceted experiences.

From canonical literature to contemporary visual art, the chapters trace the evolution of disability representations, confronting stereotypes while spotlighting narratives of agency and resilience. By probing the ways literature and art engage with the cultural constructs of disability, this volume exposes societal attitudes and advocates for a more inclusive interpretive approach of literary and visual works. The anthology also stands out for its diverse exploration of critical disability studies, encompassing both Western and Indian viewpoints, visual storytelling, and life narratives. Art has the capacity to dismantle biases, foster empathy, and advance a more equitable world. This work offers a powerful call for such change, challenging readers to reimagine how we view and understand disability.

ABOUT THE EDITORS

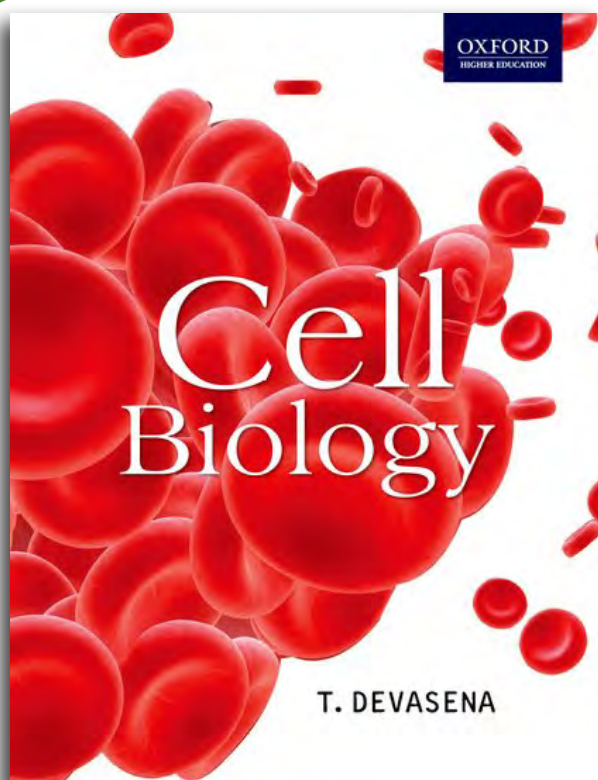
Prof. Anil K. Aneja is presently the Head, Department of English, University of Delhi and the Director, Centre for Disability Studies, University of Delhi. His areas of interest include Twentieth Century Fiction, Disability Studies, Human Rights Literature, Indian Writing in English, Translation Studies, Diaspora Studies and Communication and Technology Applications. An alumnus of St. Stephen's College, University of Delhi, he has to his credit more than a hundred conference presentations, many paper publications and a number of significant books. For nearly 30 years now, Prof. Aneja has been actively involved in the disability sector in various national and international roles. His achievements have earned him several distinctions and awards from various quarters. Among other awards, Prof. Aneja was conferred the National Award for the Empowerment of Persons with Disabilities by the then President of India in 2014 and the State Award in the Category 'Best Individual Working in the field of Social Work' by the Govt. of NCT of Delhi in 2019. In 2022, he was conferred with the prestigious 23rd NCPEDP-ITIMindtree Helen Keller Award in the category 'Role Model Persons with Disabilities'.

Dr. Nidhi Vats is a prolific scholar with numerous publications including two books. An Associate Professor in the Department of English, University of Delhi with over 12 years of teaching experience, her areas of expertise include Indian English Literature, Indian Mythology, Language Studies, Folklore Studies, and Disability Studies.

Print ISBN: 9789367259139

eISBN: 9789367256404

BIOTECHNOLOGY



Cell Biology

T. DEVASENA

Cell Biology

Cell Biology is a textbook for students of biotechnology and allied disciplines to understand the functioning of a cell—the fundamental unit of life.

The book offers a comprehensive and detailed coverage of various themes of the subject, including the fundamental concepts of membrane transport, cells of the immune system, haematopoiesis, genetic mechanism in cells, metabolic pathways, germ cells, cytoskeleton, and cell signalling. The book also discusses cell differentiation, stem cell biology, and various analytical techniques employed in cell biology.

Each chapter is reinforced with learning features such as summary of concepts, terms to remember, review questions, and multiple-choice questions that help in effective recapitulation.

Key Features

- Includes self-explanatory line diagrams and flow charts for easy understanding of concepts
- Provides explanations to important topics such as cellular metabolic pathways, haematopoiesis, and stem cell biology
- Discusses many advanced topics, including cell nanofactories, artificial cell, liver cancer cell imaging, and brain cell imaging by gold nanoparticles
- Includes appendices on types of cells in the human body, biochemical reference values, pI values of amino acids, molecular weight of proteins, and specific rotation of carbohydrates

T. Devasena is Assistant Professor, Centre for Nanoscience and Technology, Anna University, Chennai. She has around a decade of post-doctoral experience in teaching and research, which includes a brief stint as a research scientist at the Centre for Micronutrient Research, Annamalai University, in association with Johns Hopkins University.

Dr Devasena has published numerous research articles in leading national and international journals of repute and has been conferred with numerous awards and honours in recognition of her academic excellence. She is also the author of *Enzymology* (OUP).

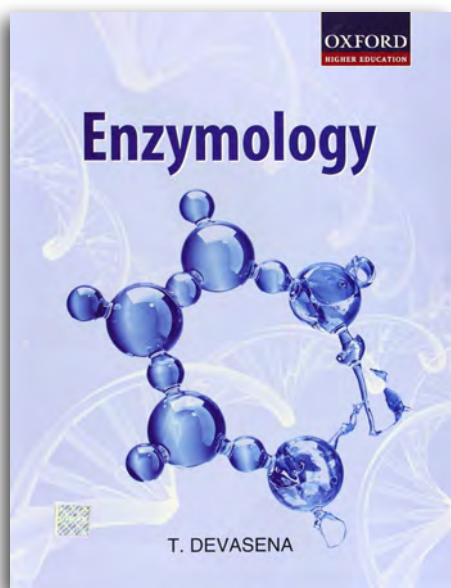
Print ISBN: 9780198075516

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TOC list

Enzymology

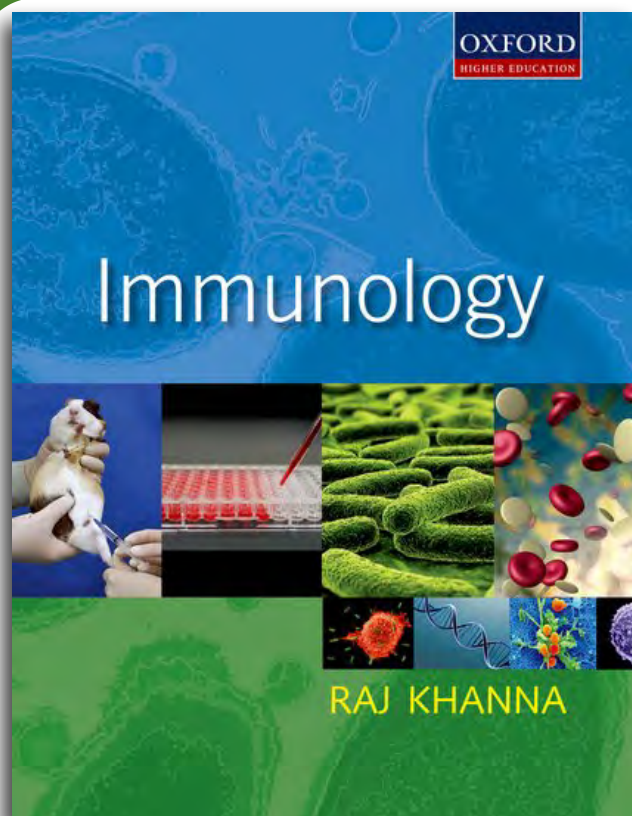


The book covers all the fundamental and inevitable concepts like Enzyme Kinetics, Enzyme Inhibition, Enzyme Activity Regulation and proceeds in to discussion of applications of enzymes in various domains including Molecular Biology, Cloning and Genetic Engineering. A separate chapter has been devoted to the study of Enzyme Engineering and Technology, which the engineering students would find useful.

About the Author

T. Devasena is Assistant Professor, Centre for Nanoscience and Technology, Anna University, Chennai. Dr Devasena has published numerous research articles in leading national and international journals of repute and has been conferred with numerous awards and honours in recognition of her academic excellence.

Print ISBN: 9780198064435
 eISBN: 9780199085118



Immunology

Immunology has been written primarily for undergraduate students of biotechnology and biochemistry as also medicine. The book provides an in-depth coverage of the fundamental concepts of immunology, suitably aided with numerous illustrations and exhibits.

The initial chapters of the book provide a broad overview of the immune system and its functioning. The subsequent chapters discuss antibodies, the major histocompatibility complex (MHC), antigen receptors, cytokines, lymphocyte activation, immune responses against pathogens, and the manipulation of the immune system by various vaccine strategies. The book also delves into hypersensitivity states, immunodeficiency disorders with special emphasis on the HIV/AIDS pandemic, transplantation, and tumour immunology. Tolerance and autoimmunity have been linked for a better understanding of the mechanisms that lead to autoimmune diseases.

Owing to its comprehensive coverage, this book would be useful to postgraduate students of biochemistry, biotechnology, and microbiology as also researchers.

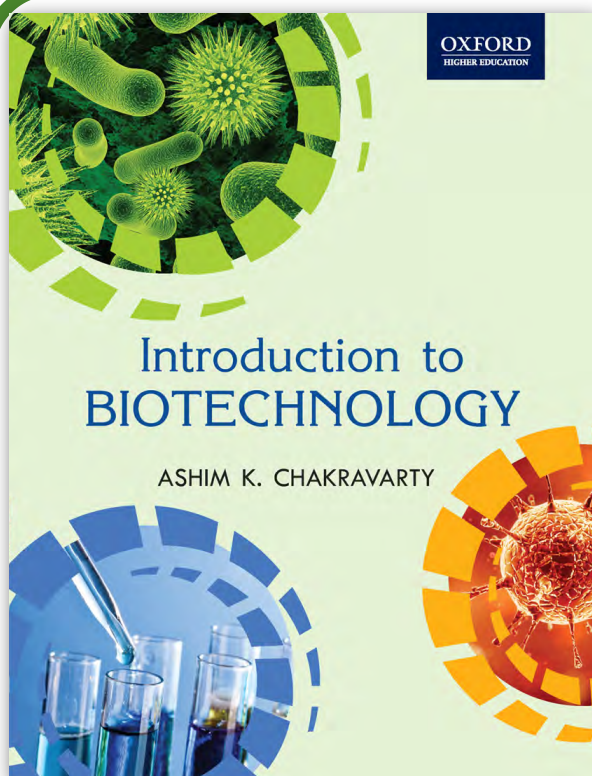
Key Features

- Contains numerous extensively labelled colour illustrations in the text
- Provides carefully written chapter summaries to assist quick revision and a comprehensive glossary for reference
- Presents recent research areas such as toll-like receptors of the innate immune system and their role, regulatory T cells and their manipulation for clinical use, donor-specific tolerance in transplantation, and cancer immunotherapy including cancer vaccines
- Includes an appendix on major immunological methods, immunoassays, and experimental systems
- Includes immunological techniques, such as RIA, ELISA, agglutination, and precipitation, which have wide-ranging applications

Raj Khanna, formerly Professor, Department of Biochemistry, University of Lucknow, is a gold medallist in biochemistry with master's and doctoral degrees from the University of Lucknow. She has extensive teaching experience spanning over three decades at both the undergraduate and postgraduate levels. Dr Khanna has done research in the area of clinical biochemistry and has been associated with various research projects. She has contributed several research papers to journals of national and international repute.

Print ISBN: 9780198075516

eISBN: 9780199084289



Print ISBN: 9780198081814

Introduction to BIOTECHNOLOGY

Introduction to Biotechnology has been written primarily for undergraduate and postgraduate biotechnology and microbiology students. Written in a lucid manner, the book covers the basics as well as advance topics of the subject.

Beginning with a discussion on the basic structure and functioning of cells and cell organelles, the book goes on to discuss biomolecules and biochemical reactions, as well as genetics and molecular biology. It also discusses in detail the process of DNA replication along with the replication machinery. The later chapters of the book explain the basic biotechnological techniques such as recombinant DNA technology, genomics, proteomics, bioinformatics, enzyme biotechnology, microbiology, plant and animal biotechnology, immunology, and environmental biotechnology. The book also covers bioethics and IPR.

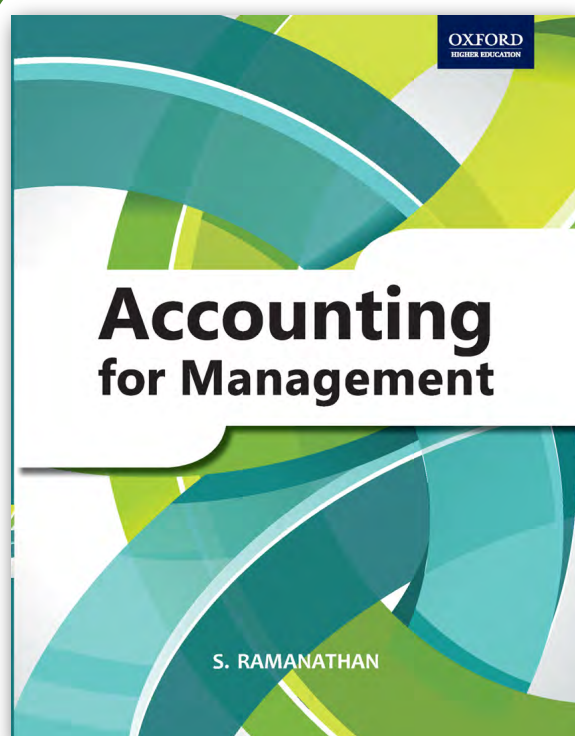
Key Features

- Includes numerous well-labelled illustrations and some exhibits and textboxes that provide additional information
- Discusses the scope and applications of biotechnology in agriculture, biomimetics, biofuels, biosensors, monoclonal antibodies, stem cell technology, etc.
- Presents individual chapters on Bioethics and Biosafety and Intellectual Property Rights
- Provides carefully written chapter summaries and objective questions, such as MCQs, true/false statements, fill in the blanks, and a set of review questions in every chapter
- Includes biographies of famous scientists at the end of each chapter
- Provides some lab and fun experiments and an exhaustive glossary at the end of the book

Ashim K. Chakravarty is Visiting Professor, Department of Biotechnology, University of North Bengal.

eISBN: 9780199084395

BUSINESS MANAGEMENT



Print ISBN: 9780198093312

Accounting for Management

Accounting for Management is a comprehensive textbook specially designed for postgraduate students of business management. It follows a practice-oriented approach to explain the core concepts of accounting, with the help of numerous illustrations and solved examples.

The book is divided into five parts and provides a comprehensive coverage of financial accounting, cost accounting, and management accounting. Part I on basic financial accounting discusses accounting concepts, accounting books and entries, and corporate reporting. Part II on financial management covers financial statement analysis, fund flow and cash flow analysis, working capital management, and capital budgeting. Part III on cost analysis and product costing includes introduction to cost accounting, material cost control, overhead cost allocation, activity-based costing, etc. Part IV on management accounting and decision-making enumerates the cost-volume-profit relationship, decision-making, and pricing. The book concludes with Part V on planning, control, and performance measurement that discusses standard costing, budgetary control, responsibility accounting, among other topics.

The book will also be useful for business and accounting professionals for its optimal mix of theory and practice.

Key Features

- Covers important contemporary accounting concepts of product life cycle costing, target pricing, activity-based costing, among others
- Presents interesting and engaging case studies at the end of every chapter
- Provides a variety of chapter-end exercises including multiple choice questions and unsolved problems
- Includes appendices that provide useful analysis of IFRS, Indian GAAP, and US GAAP guidelines

S. Ramanathan is a visiting professor at the Institute of Chartered Accountants of India, Institute of Cost Accountants of India, and Institute of Management Studies (Kanpur University).

Prof. Ramanathan has four decades of rich industry experience in reputed firms at top management positions, particularly in the area of financial management and accounting. He has previously worked as an auditor with the Government of Madras (Chennai) and also Finance Controller with British India Corporation Ltd (Kanpur).

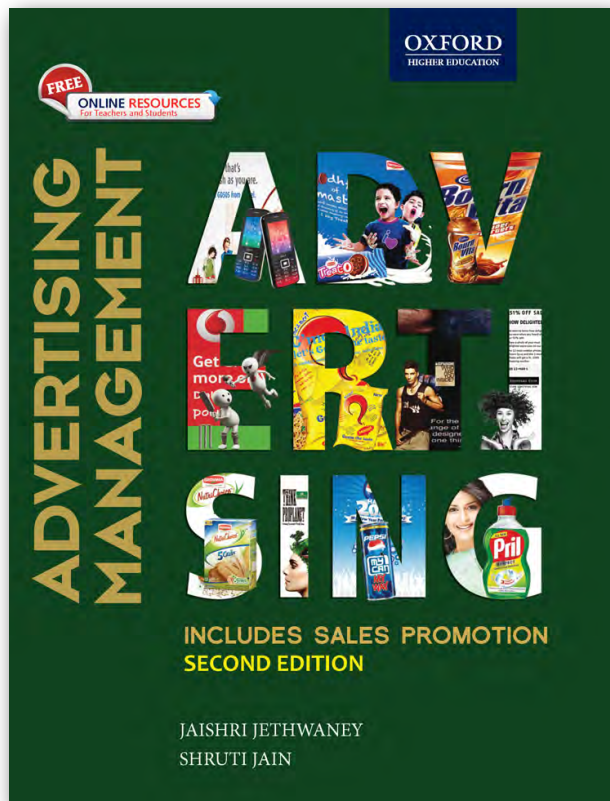
eISBN: 9780190992330



TOC list



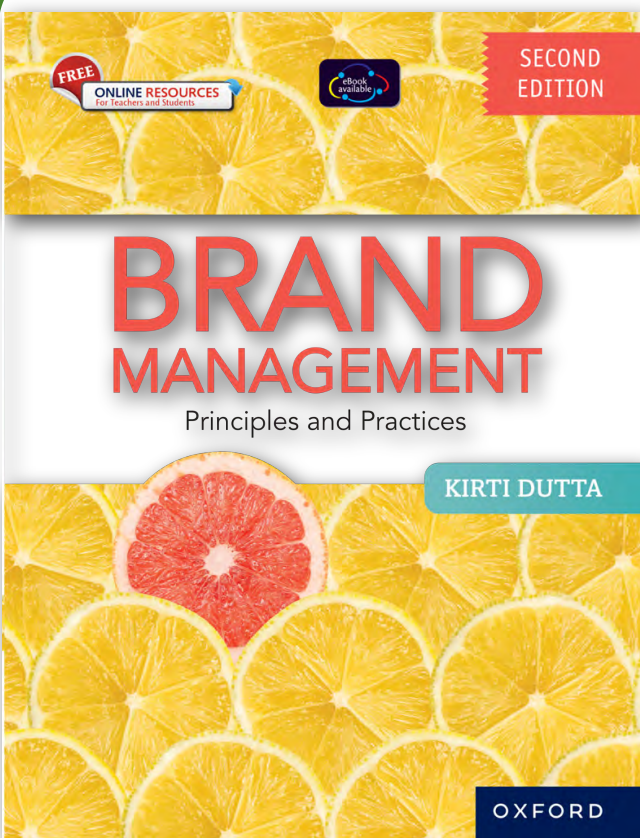
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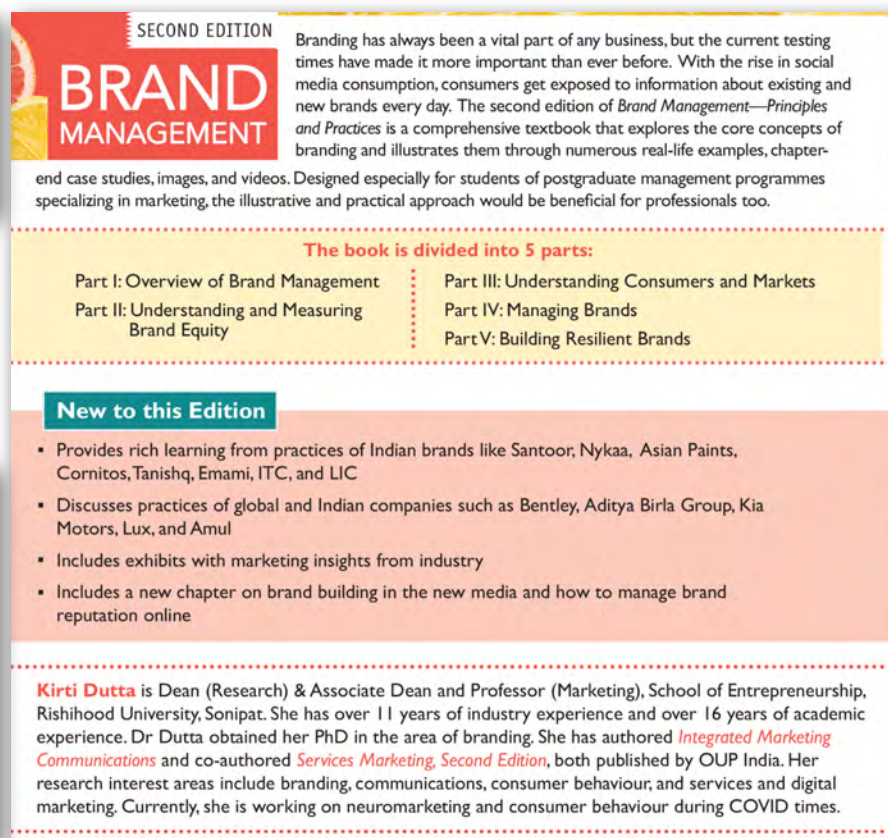
Print ISBN: 9780198074120



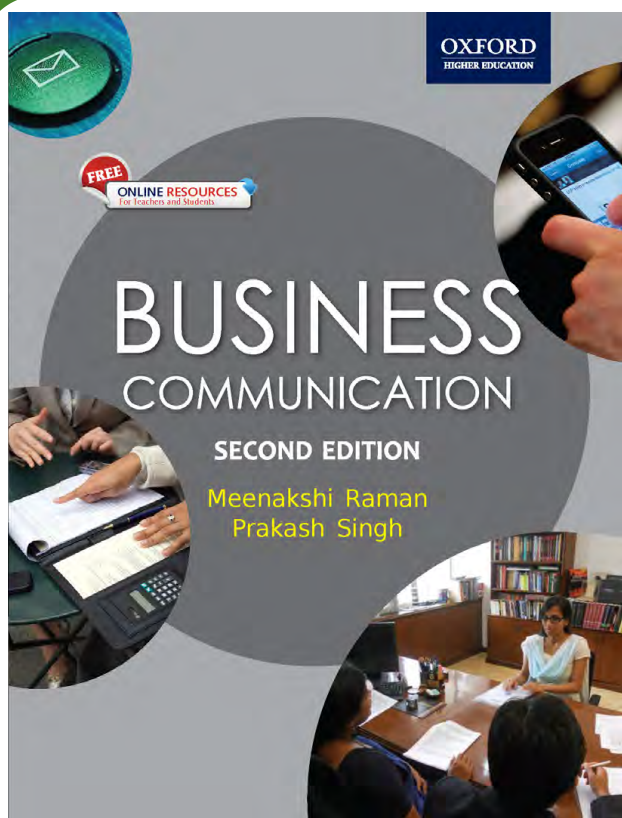
eISBN: 9780199084265



Print ISBN: 9780190124137



eISBN: 9789354974885



Print ISBN: 9780198077053

BUSINESS COMMUNICATION

SECOND EDITION

The second edition of *Business Communication* is a comprehensive textbook specially designed to meet the needs of management students. The text material has been restructured to provide a more balanced and exhaustive coverage of the subject and give an in-depth coverage of the core components of business communication.

The book is now divided into four parts comprising 21 chapters. Beginning with an introduction to the principles of business communication in the first part, it goes on to discuss the written aspects in the second part. While the third part concentrates on developing oral skills for business, the fourth part analyses specific communication needs.

New to This Edition

- Two new chapters on cross-cultural communication and career building and résumé writing
- New sections on interpersonal communication, communication styles, fluency development strategies, types of interviews, video conferencing, teleconferencing, etc.
- New features such as business communication insights and business communication tools
- Sidebars for easy recapitulation
- New appendices on interview questions, impact words, transitions, British and American vocabulary, common usage errors, and commonly misspelt words

Praise for the First Edition

This handbook has been written particularly with students of management studies in mind.

—The Journal of Professional and Academic English, Winter 2009 – Spring 2010 Issue 35, January 2010

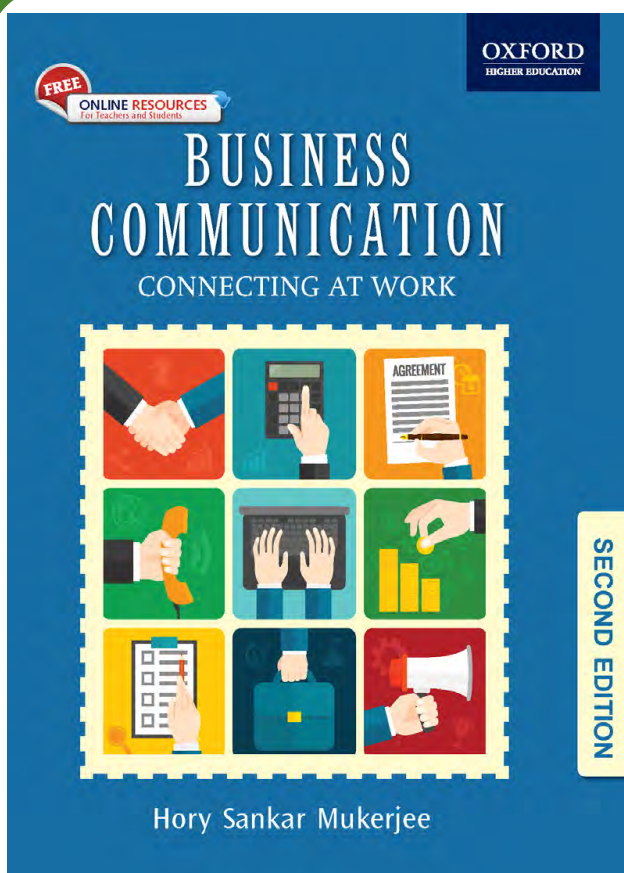
Business Communication is a very comprehensive title covering major aspects of the subject in depth.

—Prof. Dhruva Chak, BIMTECH, Greater Noida

Meenakshi Raman was formerly Professor and Head, Department of Humanities and Social Sciences, at the Birla Institute of Technology and Science (BITS) Pilani, KK Birla Goa Campus.

Prakash Singh is Associate Professor and Area Chairman, Finance and Accounting, Indian Institute of Management, Lucknow.

eISBN: 9780199095414



Print ISBN: 9780199463152

BUSINESS COMMUNICATION

SECOND EDITION

The second edition of *Business Communication* is specially designed to meet the requirements of postgraduate students of management. The book aims to provide an understanding of communication practices and prepare students for their future assignments in the corporate world.

While providing a comprehensive coverage of the subject, this edition continues to include some interesting features such as 'communication mantras' as well as numerous case studies and exhibits. Theory and examples from the business world have been integrated to provide rich insights into the subject. Professionals and readers who are keen to enhance their communication skills will also benefit from this book.

Key Features

- Chapters provide a crisp theoretical foundation, along with several examples, case studies, tips, and communication strategies.
- Self-assessment exercises, multiple-choice questions, concept-review questions, and critical thinking questions help students apply their learnings to solve realistic problems.
- Communication mantra provided at the end of the chapter challenge the traditional way of thinking and aid in holistic development of students into better communicators.

New to the Second Edition

- New topics: Introduces topics such as impact of technology and social media on communication, social networking and job search, and bring your own device (BYOD).
- New Exhibits: Includes new exhibits such as failed negotiations at Singur and the Dabbawallas of Mumbai.
- Role Plays: Presents a detailed real-life corporate situation in each chapter with an activity based on it that will aid students tackle future business situations.

Praise for the First Edition

The book is written in a style that is well-received and understood by the students.

Prof. Archana Parashar, IIM, Raipur

Not many books are available with such simple yet relevant cases in communication.

Prof. V. Chandra, IMI, New Delhi

Hory Sankar Mukerjee is presently Principal—Education, Training, and Assessment with Infosys Limited, Hyderabad. He has nearly 13 years of professional experience spanning academia and industry. He has earlier worked with Standard Chartered and Tata Infomedia.

eISBN: 9780199094219



TOC list



6



Print ISBN: 9780198098621

Business Environment

Business Environment is a comprehensive textbook specially designed for the students of business management. It takes an application-based approach to explain the concepts of business environment with the help of examples, exhibits, and case studies.

The book is divided into eight parts. Part I includes the overview of business environment and discusses diverse environments such as sociocultural, legal, political, and economic. Part II delves into the issues related to social governance and business environment. Part III discusses topics related to economic planning and development environment. Part IV focuses on macroeconomic policies such as money market, capital market, inflation, monetary and credit policy, fiscal policy, and so on. Part V delves into labour market environment and discusses subjects such as trade unions and their roles, wages and employment policy, industrial relations, and labour market reforms. Part VI discusses trade barriers and strategy, foreign trade policy, and international financial environment. Part VII evaluates business environment in a globalized world. Finally, Part VIII explores business strategy across international borders.

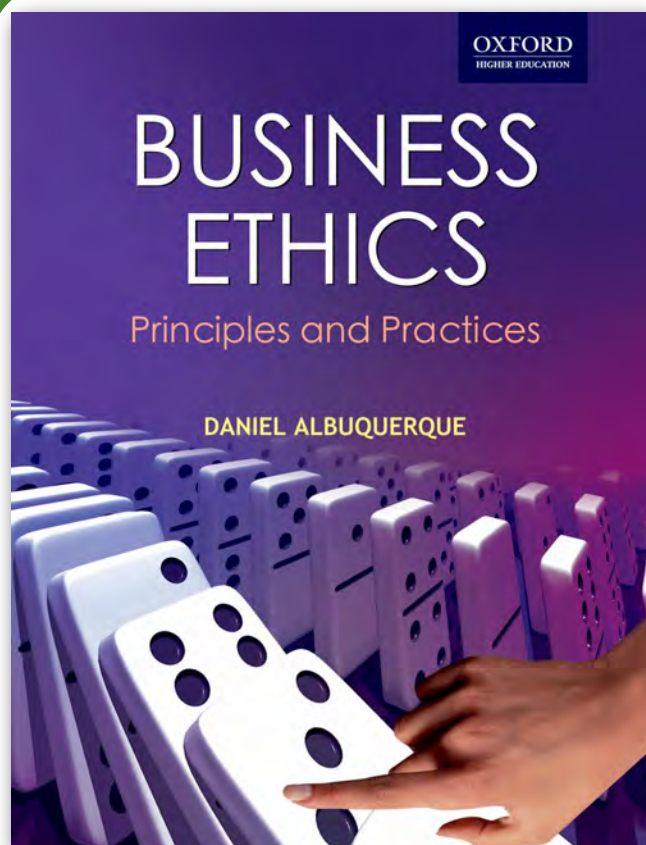
Besides students, business managers and finance professionals will also find this book very useful for its focused coverage and sound theoretical base.

Key Features

- Provides clarity to the relationship between business and environment through engaging discussions
- Presents and refers to relevant and updated data related to business environment
- Includes numerous sidebars, tables, and figures to facilitate understanding of the subject
- Provides several informative exhibits and cases to help apply concepts in real-life situations

B.N. Ghosh was visiting professor at Institute of Management and Technology (IMT), Punnapra, Kerala and Sir John Hicks College of Economics and Management, United Kingdom. Dr Ghosh was formerly Director of IMT, Punnapra.

eISBN: 9780190992262



Print ISBN: 9780195699647

BUSINESS ETHICS

Principles and Practices

Business Ethics: Principles and Practices provides an insight into the crucial role played by ethics in managerial decision making and the impact of such decisions on organizations. The book is designed to serve as a textbook for students of management but may also be profitably used by management professionals.

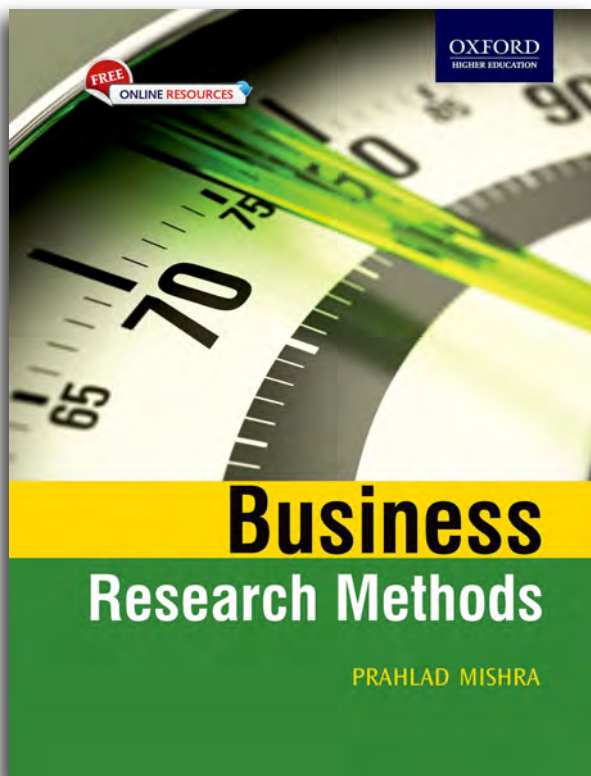
The book follows a debate-based approach, wherein views, both for and against, are presented, followed by concept analysis and logical deduction. Starting with a broad classical overview of the meaning and scope of ethics and the development of ethical thought, the book discusses the applications of ethical standards to business areas such as corporate governance, marketing and brand management, advertising, and finance. The discussion then shifts to issues of workplace ethics and consumer rights. Special focus is placed on ethical choices related to the environment, cyber space, and criminal intimidation. Contemporary issues such as the corporate code of ethics, political correctness, and the role of civic society in upholding moral values are discussed in detail. Finally, several open-ended issues such as intellectual property rights, human rights, terrorism and animal rights, and their consequences on businesses are examined.

Key Features

- Lays emphasis on ethics as a serious academic discipline rather than just a study of moral codes
- Provides exhaustive coverage of various facets of ethics in the business arena
- Is well aided with a number of examples, case studies, and end-chapter review questions
- Presents a clearly drawn ethical development programme along with an apt 'management mantra' at the end of each chapter

Daniel Albuquerque, formerly Professor, Goa Institute of Management, Goa, and advisor to the Chief Minister of Goa, is currently a visiting professor of management at various business schools. He obtained his doctorate from and also taught at the Julius Maximilian University, Wuerzburg, Germany, and is a member of the Franz Brentano Research Center of the same university. He is also a member of the World Ethics Center of the University of Jena, Germany. Over a career spanning three decades, Prof. Albuquerque has worked with several academic institutions and corporate organizations in India and abroad. He is the author of over half a dozen books, several scientific papers, and freelance articles.

eISBN: 9780199083978



Business Research Methods

Business Research Methods is a comprehensive textbook designed to meet the requirements of postgraduate management students. It explores the core concepts of research methods and its practice, especially in business management scenarios through numerous exhibits, solved exercises, and cases.

The book is divided into four parts. Part I, Conceptual Background of Research, provides a detailed theoretical and conceptual understanding of research, its types, usage, and specific roles of a researcher. Part II, Operationalization in Research and Instruments Designing, highlights the use of probability and distributions in different management situations, as also parametric and nonparametric tests. It also discusses sampling and research design in detail. Part III, Univariate and Bivariate Techniques for Data Analysis, addresses tabulation, descriptive statistics, and bivariate regression model and explains the use of SPSS and Excel interpreting data for decision-making. Part IV, Multivariate Techniques for Data Analysis, discusses techniques such as discriminant analysis, factor analysis, cluster analysis, structural equation modeling, canonical correlation, and many more. This part concludes with a separate chapter on report writing and ethics in presentation.

Written in a simple manner with inclusion of SPSS and Excel outputs and their inference, the book will be useful for students and young professionals.

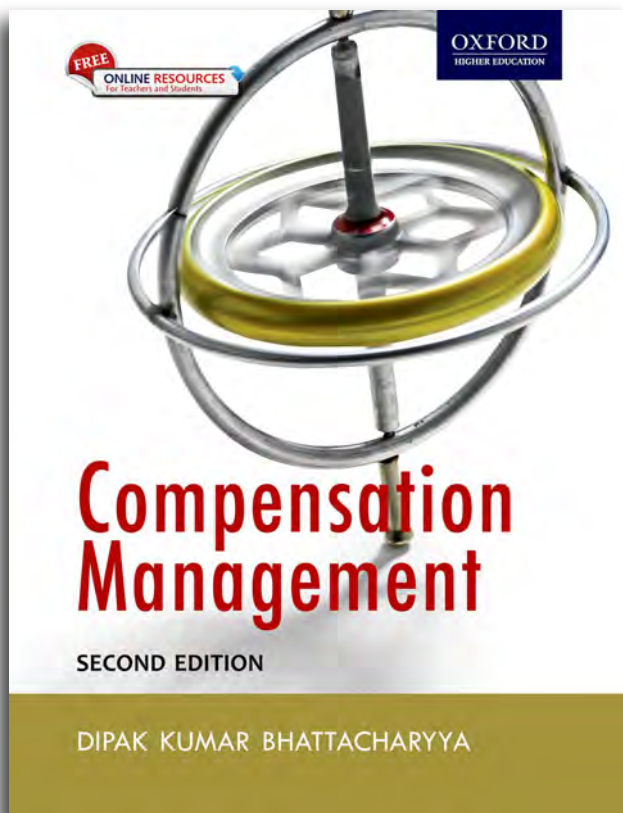
Key Features

- Includes a chapter on integration of multivariate techniques for data analysis to explain the usage of different techniques, together and separately, in different business situations.
- Provides stepwise explanation of SPSS and Excel usage by organizations to stimulate students' understanding about the application of these software in real-life scenarios.
- Contains numerous solved and unsolved exercises and exhibits with business applications for better understanding.
- Includes multiple choice, concept review, and critical thinking questions along with project assignments to hone the managerial skills of the readers.

Prahlad Mishra is Professor at Xavier Institute of Management, Bhubaneswar. He has been a part of numerous national and international seminars and presented numerous research papers and articles.

Print ISBN: 9780198094739

eISBN: 9780199094202



Compensation Management SECOND EDITION

The second edition of *Compensation Management* is an exhaustive textbook designed to cater to the syllabi requirements of management students. The text provides comprehensive coverage of all the basic aspects of compensation management. Furthermore, advance topics of compensation management such as difference between compensation and payroll management, pay grades and pay bands, labour welfare administration, compensation design, sample KRA and KPI, and compa-ratios have been included in the book.

The focus of this particular edition is on updating rules and regulations pertaining to compensation management and the inclusion of emerging areas such as PRP in PSEs, smart compensation practices for talent engagement, recent trends in team-based compensation, foreigners working in India and related statutory compliances, international compensation strategies, and cultural issues in international compensation. Apart from providing extensive coverage of the core concepts of the subject, it includes numerous solved examples to provide students with a practical orientation towards quantitative aspects of compensation management.

Key Features

- Explores emerging issues in compensation management such as cost to company, EVA, designing an effective sales compensation plan, say on pay issues, product and organizational life cycle and its relation with sales compensation, and expatriate and repatriate compensation
- Includes chapter-opening and chapter-end case studies from various organizations on compensation management

New to This Edition

- New chapter on reward management
- New sections on topics such as factors influencing compensation, wage boards, wage policy, CTC, say on pay issues, EVA, PRP in PSEs, compa-ratios, and more

Dipak Kumar Bhattacharyya is presently Professor, Organizational Behaviour, Xavier Institute of Management, Bhubaneswar (XIMB).

Print ISBN: 9780199456543

eISBN: 9780190991029



TOC list



Print ISBN: 9780199472680

Consumer Behaviour

Consumer Behaviour, intended for students of MBA specializing in marketing, undertakes detailed discussions to explain and analyse behaviour of Indian consumers, and strategies used by marketers to deal with them.

The book is divided into 16 chapters. It begins by introducing the subject, market research, market segmentation, and positioning. Following this, the book elaborates on the process of consumer decision making also providing key learnings for a budding marketer to handle situations. Effect of psychological influences such as needs, emotions, memory, personality, perception, imagery, and attitude while making a choice before a purchase is well covered. Elaborate discussions on sociological influences on buying behaviour of a consumer including family, social class, lifestyle analysis, and opinion leadership are provided too. The book also includes chapters on integrated marketing communications, models of communication strategy, and diffusion of innovation.

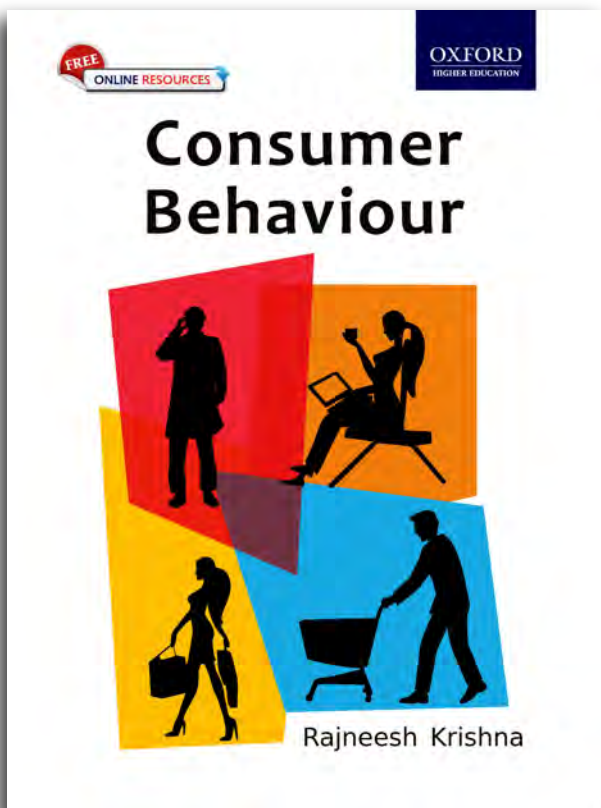
With its application-oriented approach, the book would be useful not only for students but also for marketing professionals.

Key Features

- Detailed coverage of consumer decision-making process, market segmentation, and positioning of products as per consumer choices is provided
- Sections on Marketing Implications provide young professionals ways to deal with customers in different situations
- Important Indian and Asian cases at the beginning and end of chapters enhance and hone the marketing skills of the readers
- Chapter-end exercises including frequently asked questions, review questions, critical thinking questions, and project assignments help students evaluate their understanding

Sangeeta Sahney is Associate Professor, Vinod Gupta School of Management, Indian Institute of Technology (IIT), Kharagpur. She has also been associated with Asian Institute of Technology Bangkok and Indian Institute of Technology Roorkee.

eISBN: 9780199098835



Print ISBN: 9780198062929

Consumer Behaviour

Consumer Behaviour is a comprehensive textbook designed for students of postgraduate management programmes specializing in marketing. It aims to help readers understand and analyse the behaviour of Indian consumers and develop winning marketing strategies.

The book begins by explaining the foundation and scope of consumer behaviour and explores its linkages with multi-disciplinary social sciences. Following this, the importance of groups, cultures, and demography of India in shaping the mind of an Indian buyer is discussed. The book also explains psychosomatic concepts that impact consumer behaviour such as need, motivation, emotion, perception, memory, attitude, and personality. The book concludes with chapters on consumer research and consumer decision-making processes and models.

Inclusion of exhibits and numerous research studies conducted by the author himself will make the book useful for students as well as young marketing professionals in understanding Indian consumers and formulating marketing strategies.

Key Features

- Discusses in detail the sociological and psychological aspects to explain core concepts of consumer behaviour
- Provides Indian perspective to help readers relate to the choices and actions of consumers
- Includes plenty of exhibits and case studies to explain strategic decisions of marketers based on their understanding of consumer aspirations
- Provides numerous critical thinking questions and project assignments to enhance and hone the marketing skills of the readers

Rajneesh Krishna is Associate Dean and Professor, Mudra Institute of Communications, Ahmedabad (MICA). He holds a PhD from IIT Bombay and has more than 15 years of experience both in academia as well as the industry. He is a visiting faculty at reputed management institutes such as IIM Ahmedabad, IIM Kozhikode, IIM Kashipur, S.P. Jain Institute of Management and Research, and ICFAR. He has also done a number of consulting projects on marketing research with leading companies such as Asian Paints, Mahindra and Mahindra, Sahara, Rasna, and Proctor and Gamble.

eISBN: 9780190992408

OXFORD
 HIGHER EDUCATION

Corporate Governance



SATHEESH KUMAR

Corporate Governance

Corporate Governance is a comprehensive textbook designed to meet the requirements of postgraduate management students. It provides an in-depth analysis of the core concepts of the subject and supplements them with relevant examples, exhibits, and case studies.

The book is divided into four parts. Beginning with an introductory chapter that defines corporate governance and a director's role in a company, Part I covers types of corporations, theories, and models of governance. It also examines the events that have led to the current thrust on corporate governance. Part II elaborates on the structure of the board and its development process. It also highlights the issues related to compensation, the performance review of directors as well as the importance of leveraging good governance for competitive advantage. Part III gives a broad view of the governance-related problems associated with the typical ownership patterns and of capital market institutions from the stakeholder perspective. The ground rules for a director to perform responsibilities and duties are also discussed in this part. Part IV, consisting of a single chapter, concludes the book with a discussion on the future of corporate governance.

With its comprehensive coverage and approach, and its real-world examples and case studies, this book would also serve as an authoritative guide for professionals.

Key Features

- Expounds on issues and challenges faced by corporates in applications of governance in India as well as abroad
- Includes detailed reports of some of the various committees constituted by SEBI, including the Kumar Mangalam Birla Committee Report, Narayana Murthy Committee Report, and Clause 49 guidelines
- Contains extensive discussion on the European Union approach to corporate governance
- Provides numerous real-world cases such as Satyam Computers, Jubilant Organosys Ltd, and Reliance Industries Ltd

T.N. Satheesh Kumar, Professor, DC School of Management and Technology, Vagamon, Idukki, was formerly faculty at ICFAI Business School (IBS), Kochi. He has more than 30 years' experience, both in the industry and the academia. He was Regional Business Manager at Accel IT Academy and Senior Manager – Resources and Marketing at Accel Software & Technologies Ltd. He has taught at reputed institutions such as SCMS Business School and Cochin University of Science and Technology (visiting), both in Kochi. Prof. Kumar has published a number of papers and articles in management journals and national business dailies.

Print ISBN: 9780198062233

eISBN: 9780199084005

 OXFORD
 HIGHER EDUCATION

Corporate Social Responsibility



Madhumita Chatterji

Corporate Social Responsibility

Corporate Social Responsibility is a comprehensive textbook designed for postgraduate students of business management. The book explores the core concepts of corporate social responsibility (CSR) and explains them through numerous examples, mini cases, exhibits, and case studies.

Beginning with an introduction to CSR, the book goes on to discuss its evolution and the theories of corporate governance, as also the key concept of stakeholders of business. It explores the role of various institutions, the processes of integrating CSR into the strategic framework of organizations, and sustainability and its challenges. Further, it provides a framework for CSR reporting, an insight into the CSR practices prevalent in India, and a thematic representation of the global scenario. The book concludes by taking a look at the future trends in CSR.

Besides students of management, the book will be useful to professionals to understand that CSR is not philanthropy and that sustainable success in businesses can be achieved by striking a balance between the financial bottom line and the interest of the employees and the community at large.

Key Features

- Examines the CSR debates framed by various business engagements in defining their social role
- Provides a unique comparative study of CSR in four different countries (US, UK, New Zealand, and Indonesia) with real data
- Discusses CSR practices of Indian and global companies such as HUL, ITC, Philips, Satyam, Tata Group, Potl Port in Georgia, GlaxoSmithKline, Suzlon, and Nestlé

Madhumita Chatterji is Director, PGDM and Strategy & Academic Advancement at Acharya Bangalore Business School (ABBS), Bengaluru. She obtained her doctorate from Jadavpur University and underwent a short-term post-doctoral programme in history, politics, and society from the University of Oxford, UK.

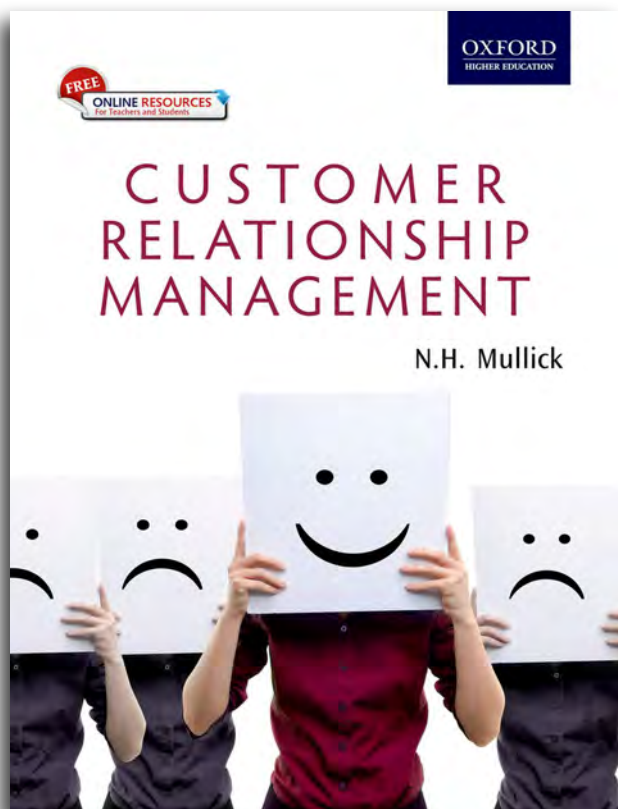
Dr Chatterji has over 16 years of experience in teaching and research. Her current interests are in the areas of ethics, corporate social responsibility, cross-cultural management, and corporate governance. She is a prolific writer and has authored one book and contributed various research articles in national and international journals.

Print ISBN: 9780198069836

eISBN: 9780190993061



TOC list



CUSTOMER RELATIONSHIP MANAGEMENT

Customer Relationship Management (CRM) is a comprehensive textbook designed to meet the needs of postgraduate management students specializing in marketing. It explains the concepts and application of CRM through numerous examples, exhibits, and cases.

The book is divided into four parts comprising twelve chapters. Part I on *CRM Concepts and Processes* introduces the subject and establishes the importance of understanding and collaborating with customers. Part II on *Analytical CRM* discusses database management, data mining, and analysis. Part III on *CRM Operations* discusses the methods to design loyalty programmes and role of marketing channels in CRM. The final part (IV) on *CRM: Technology, Implementation, and Applications* includes discussions, technological developments of CRM, need for its implementation in the services sector and its assessment.

Besides students, the book with its application-oriented approach would also be useful to CRM professionals.

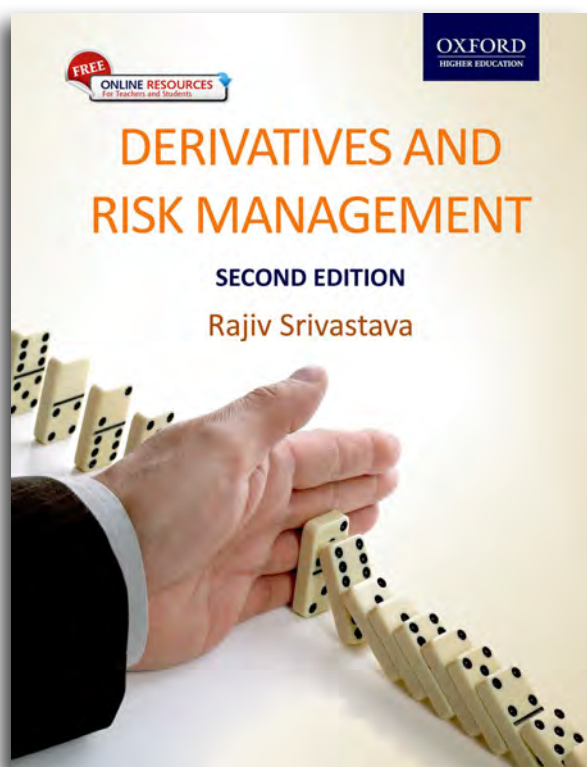
Key Features

- Discusses current CRM-related topics such as collaboration using social networks, mobile CRM (m-CRM), integration with ERP, etc.
- Supports text with numerous figures, tables, and exhibits to make presentation of concepts crisp and reader-friendly
- Includes variety of chapter-end exercises including objective type questions, concept review questions, critical thinking questions, and project assignments to test the understanding of the subject
- Provides chapter-end case studies to demonstrate challenges involved in CRM in real-life situations

N.H. Mullick is Professor, Department of Management Studies, Jamia Millia Islamia, New Delhi. He has an experience of over 30 years in academia and industry and has previously been associated with IILM Group of Institutions, Asia-Pacific Institute of Management, New Delhi, IIMT, Gurgaon, and also Zenith Computers, Onida, etc.

Print ISBN: 9780199456758

eISBN: 9780199094226



DERIVATIVES AND RISK MANAGEMENT SECOND EDITION

Derivatives and Risk Management, 2e, is a very comprehensive textbook designed to cater to the syllabi requirements of financial management students. The text provides extensive and intensive coverage of all the basic principles of derivatives and risk management. Furthermore, advanced topics such as credit risk, securitization, and credit derivatives are also covered in detail. It also includes corporate finance-related topics such as corporate securities seen as derivatives and real options.

The focus of this particular edition is to provide a better and more organized coverage of the subject. In addition to covering regular subject material, the text covers weather and energy derivatives and accounting for derivatives. A few cases that throw light on the dangerous side of derivatives are also discussed. Other than providing an extensive coverage of the core concepts of the subject, it includes numerous solved examples and graphical illustrations to provide the students with a practical orientation towards derivatives.

KEY FEATURES

- Explores new issues in derivatives such as volatility and value at risk, credit risk, and also relatively complex products such as option on bonds, options on swaps—swaptions, etc.
- Provides examples and boxed exhibits for illustrating the key applications of derivatives and risk management
- Includes case studies on derivatives used by various organizations that led to disasters

NEW TO THIS EDITION

- Four new chapters on corporate securities and derivatives, real options, volatility and value at risk, and derivatives disasters
- New sections on topics such as futures contract on T-bills in India; Monte Carlo simulation; exotic options such as gap options, pay-later option, lookback option, and so on; credit risk-related topics such as recovery rates, default rates, credit value at risk, and valuation of CDS including Merton model
- New feature called *Derivatives in Practice* to acquaint students with real-life situations
- Five real-life cases on derivatives that led to disasters along with lessons learnt from these incidents

Rajiv Srivastava is working as visiting Professor at three IIM campuses (Amritsar, Rohtak, and Sirmour). He has previously served as Professor with Indian Institute of Foreign Trade, Delhi and International Management Institute, Delhi. An engineer and dual MBA by qualification, he possesses a vast experience of 35 years in corporate finance, having worked at senior and top positions with various companies such as Uflex Ltd, CMC Ltd, and Rajasthan Breweries Ltd. Prior to that, he worked with the State Bank of India for a long span of 14 years where he was involved with credit appraisal, consultancy, and training of industrialists and bankers. Prof. Srivastava is the co-author of *Financial Management 2e* (OUP, 2011).

Print ISBN: 9780198089155

eISBN: 9780190993047





Print ISBN: 9780199455447

Digital Marketing

Digital Marketing is designed as a textbook for management students specializing in marketing. The book discusses various digital media and analyses how the field of marketing can benefit from them.

This book is divided into four sections. The first section, Marketing in the Digital Era, starts with an overview of e-marketing followed by the online marketing mix in the digital framework. It then discusses the role of the online consumer followed by CRM strategies that organizations can use with the help of the digital medium to retain and grow customer relationship. The second section, Business Drivers in the Virtual World, deals with the realm of social media followed by online branding, building traffic, Web business models, and e-commerce. The third section, Online Tools for Marketing, deals with various Web tools for building consumer engagement, content management, campaign management, consumer segmentation, and building market influence. Finally, the fourth section, The Contemporary Digital Revolution, deals with the world of online co-creation communities and offers in-depth discussion on Facebook marketing in addition to other Web-based tools for marketing.

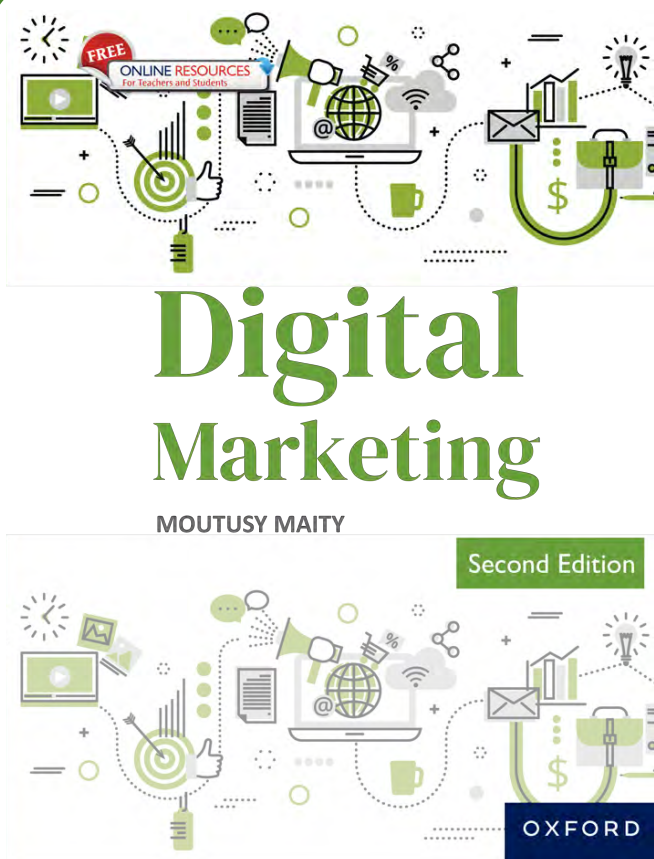
Numerous examples, exhibits, case studies, and illustrations have been included to help students assimilate the concepts better. Each chapter contains a set of concept review questions and critical thinking questions to test the knowledge gained. A section on practicing digital marketing at the end of every chapter attempts to take the student to the real-world scenario.

Key Features

- Provides comprehensive coverage of the developments and use of Internet as a marketing planning tool
- Presents the ability of the digital world to increase efficiency in established marketing functions
- Provides insights on how organizations can leverage the benefits of social media
- Discusses cutting-edge business strategies such as differentiation and cost leadership, which generate revenue while delivering customer value
- Includes both Indian as well as global case studies of companies such as Vodafone, Ford, Aviva India, Bacardi, Amazon

Vandana Ahuja is currently working as Professor of Marketing at Amity Business School, Noida. Prior to this, she was the Dean — Research and Professor of Marketing at IILM Graduate School of Management, Greater Noida. A Ph D in Management, she has over 22 years of experience in the industry and academia. She is the proud recipient of the AMP-ILDC women achievers award for excellence in Management Teaching and has conducted several MDPs and training sessions for the corporate world. She is an avid researcher and has published several manuscripts in international and national journals and also serves on the Editorial Board of several international journals. She has organized and chaired several national and international conferences and has guided several PhD students in the domain of management.

eISBN: 9780199090051



Print ISBN: 9789354972478

Second Edition

Digital Marketing

In today's time and age, Digital Marketing is invariably one of the most valuable assets for the growth of any business. In addition to helping a brand target new markets in a cost-effective way, it also creates engaging campaigns to create customer loyalty.

The second edition of *Digital Marketing* is designed with the purpose of explaining important concepts of the subject with Indian and global examples from real life. It also delves into the opportunities, problems, tactics and strategies associated with incorporating the Internet into the function of marketing. Appropriate for students of MBA specializing in Marketing, its application-oriented approach would also be useful for marketing professionals.

The text is divided into 8 sections:

- Section I: Internet Users and Usage in India
- Section II: Search Engine Marketing and Advertising
- Section III: Understanding the Consumer
- Section IV: Social Media Marketing and Social Media Analytics
- Section V: Mobile Marketing and E-mail Marketing
- Section VI: Online Marketing Strategy
- Section VII: Privacy and Ethical Issues
- Section VIII: Looking Ahead

New to this Edition

- Updated data and examples throughout the book
- Updated and new analytics-based cases on web analytics, social media analytics and more
- New chapters in the areas of Programmatic advertising, Affiliate marketing, Online privacy and ethical issues, and Legal issues
- Possible impact of Artificial Intelligence on all aspects of digital marketing
- Added activities and chapter-end exercises

Moutusy Maity is Professor, Department of Marketing, Indian Institute of Management Lucknow (IIM-L). She has also co-authored *Marketing Analytics* published with OUP.

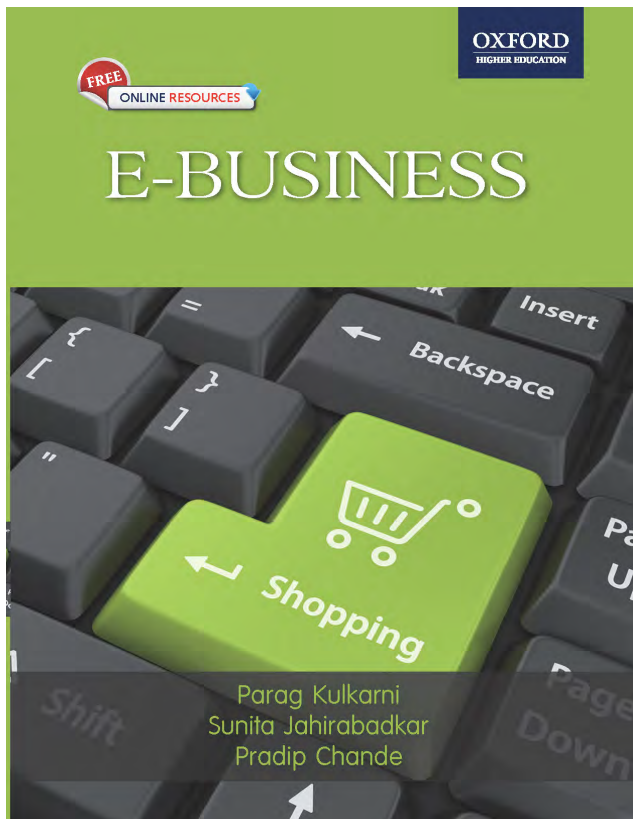
eISBN: 9789354974816



TOC list



12



Print ISBN: 9780198069843

E-BUSINESS

E-business is a comprehensive textbook designed for students of business management. It integrates e-commerce with the strategic aspects of e-business, with the help of numerous examples, exhibits, figures, and case studies.

The book covers different aspects of e-business including models, strategies, security and reliability, and evaluation and audit. It provides in-depth coverage of important issues related to e-business, such as creation of e-business plan, website development, e-market, back-end systems, online payment systems, business intelligence (BI), and knowledge management (KM). The book also delves into the management and techno-managerial aspects of running an e-business.

With its in-depth coverage of the various aspects of e-business, the book will also serve as a valuable reference for marketing and IT professionals as well as e-business practitioners.

Key Features

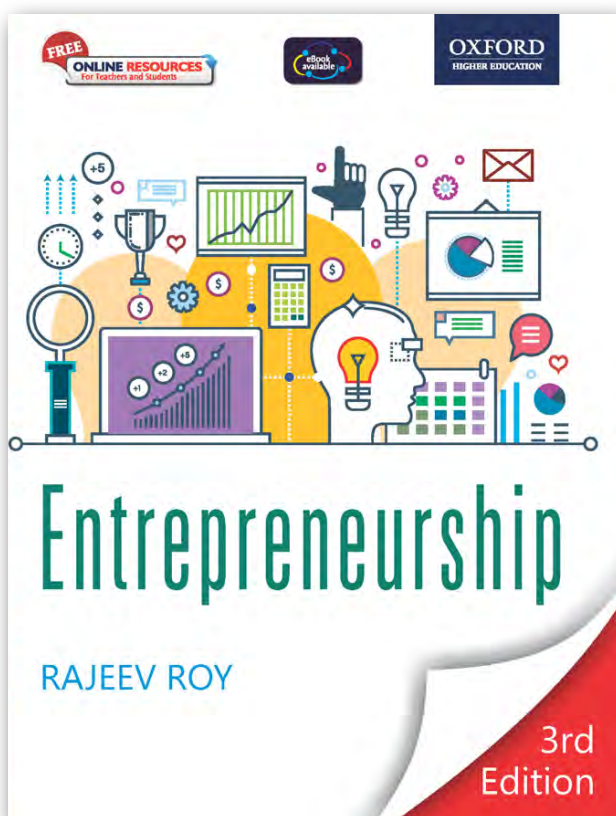
- Includes chapters on KM and BI in e-business, Internet security, Internet payment, and website development
- Discusses contemporary issues and current trends, such as mobile computing, m-commerce, Internet banking, and the IT Act, 2000
- Contains several important case studies on Indian as well as international e-business companies

Parag Kulkarni is Director and Chief Scientist, Anomaly Solutions Pvt. Ltd, Pune.

Sunita Jahirabadkar is Professor, Computer Engineering, Cummins College of Engineering, Pune.

Pradip Chande is Former Professor of Information Systems, IIM Indore.

eISBN: 9780199084142



Print ISBN: 9780190125301

Entrepreneurship 3rd Edition

The third edition of *Entrepreneurship* is designed to meet the needs of management students and entrepreneurs. The book explains concepts based on original research and the author's own experience in setting up and running entrepreneurial ventures. It aims to combine theoretical elements with a practical outlook. The book is meant to be used not just as a textbook for a course, but also lends itself well to being an actual guide to students wishing to start their own ventures.

Key Features

- Starts with the concept of understanding entrepreneurship and throws light on contemporary approaches to it
- Discusses the various issues related to doing business in India and support given to SMEs and entrepreneurs
- Elaborates on the steps involved in composing a pitch deck
- Describes day-to-day operations of an entrepreneurial enterprise, such as human resources, networking, etc.
- Discusses growth and exit strategies

New to This Edition

- Eight new chapters
- New case studies and exhibits that highlight recent business dynamics
- Revised and updated content throughout the text

Praise for the Previous Editions

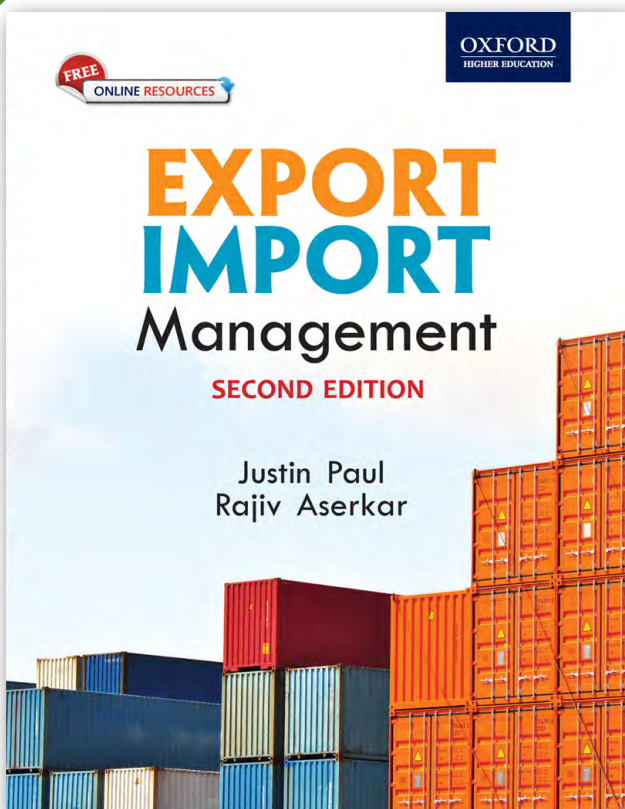
This book is and deserves to be the recommended text on the subject for management and business schools in India.
—Prof. Malcolm Harper, Cranfield University, UK

The author has very brilliantly and succinctly tackled all the aspects related to entrepreneurship. The book facilitates easy comprehension and is very student friendly.

—Prof. Akshey Kumar, Apeejay School of Management, New Delhi

Rajeev Roy is a Professor of Entrepreneurship at XLRI, Jamshedpur. He was previously associated with Indian Institute of Management (IIM), Raipur, Loyola University Chennai, Maryland, and Xavier Institute of Management, Bhubaneswar. An alumnus of IIM Ahmedabad and Ph.D from Utkal University, he is also a startup mentor and has been involved with varied entrepreneurship development activities with governments, institutes, incubators, and accelerators in 14 countries across the world.

eISBN: 9780190993214



Print ISBN: 9780198089407

EXPORT IMPORT Management

SECOND EDITION

The second edition of *Export Import Management* is a comprehensive textbook designed for management students pursuing a course in international business. The book highlights the growing significance of export–import trade and the need to understand the nuances of export management for competing successfully in the international market.

Beginning with the basics of foreign trade and export–import documentation, it delves deep into topics such as the methods and instruments of payment, export–import strategies, and export marketing. It goes on to discuss the methods of financing exporters, business risk, and customs clearance of import and export cargo pricing, and Incoterms (international commercial terms). The book also explores topics such as risk management and its coverage, containerization and leasing practices, and export incentive schemes.

Key Features

- Comprehensive coverage of trade operations, logistics, and trade finance
- Analysis of the markets in the Middle East, ASEAN, Australia, New Zealand, China, and Japan
- Export documents at appropriate places to exemplify documentation
- Case studies in most chapters
- Chapter-end questions to test the reader's understanding as also interesting exercises to put learning into practice
- Test Your Knowledge section as an appendix

New to this Edition

- Two new chapters on Incoterms and the World Trade Organization (WTO)
- New cases related to exporting challenges, exporting dilemma, and export procedures

Praise for the First Edition

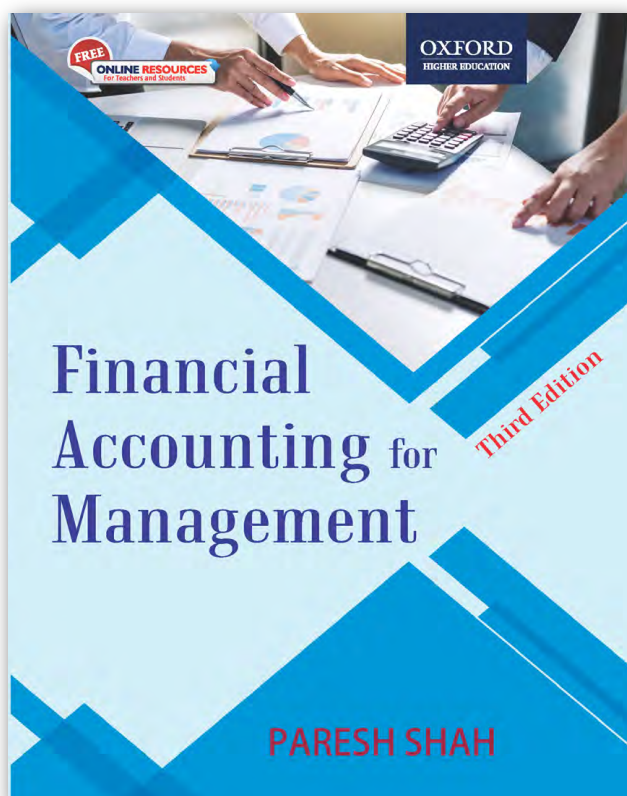
This textbook aims to explain the nuances of export–import in a simple language thus helping students to immediately grasp the concepts.

— Dejo George, Vice President, Astro Group (Malaysia)

Justin Paul is Professor, University of Puerto Rico Graduate School of Business, USA.

Rajiv Aserkar is Professor, Logistics and Supply Chain Management at the S P Jain Centre of Management, Dubai.

eISBN: 9780190993122



Print ISBN: 9780199494439

Financial Accounting for Management Third Edition

The third edition of *Financial Accounting for Management* is intended for the 1st semester students of MBA. With its application-oriented approach including examples using the three columnar ledger account format, the book will be useful for both students and professionals.

The book is divided into 5 parts comprising 20 chapters:

- Part I: Fundamentals of Accounting
- Part II: Recognition and Types of Transactions
- Part III: Financial Statements
- Part IV: Analytical Accounting
- Part V: Special Topics

New to the Third Edition

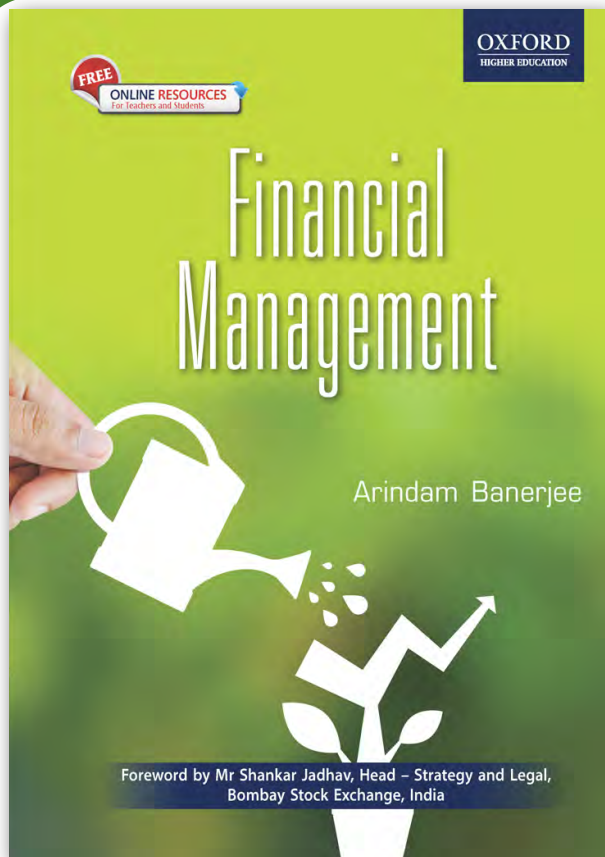
- New chapter on Modern Approach of Accounting
- Full-fledged chapter on Regulatory Framework on Accounting and Reporting
- Discussions on important topics like IFRS norms, Indian Accounting Standards (Ind AS), deferred tax assets and deferred tax liabilities, and GST accounting
- Text on business transactions through plastic cards and net banking
- Topics on contemporary revenue and expense recognition practices in different industries such as banking, IT, media, hospitality, and more

Paresh Shah, PhD (Finance), FCMA, and an alumnus of Indian Institute of Management, Ahmedabad (IIMA), is a visiting professor at several reputed institutions in the states of Gujarat, Maharashtra, and Rajasthan providing management courses to students of commerce, engineering, and medical background. Besides his teaching career of nearly 25 years, Dr Shah has a decade-long industry experience with the Tata Group. His areas of interest include teaching, research, and writing in the areas of finance, accounts, and management control system. He has published 43 research papers, including 8 at international conferences in peer-reviewed journals. He has conducted 9 colloquia in international conferences. Dr Shah has authored 10 books till now. He is also the recipient of many awards at both national and international forums.

eISBN: 9780190992392



TOC list



Print ISBN: 9780198095170

Financial Management

Financial Management is a comprehensive textbook designed especially for postgraduate students of business management. Business managers and finance professionals will also find this book useful for its focused coverage, sound theoretical base, and practice-oriented approach.

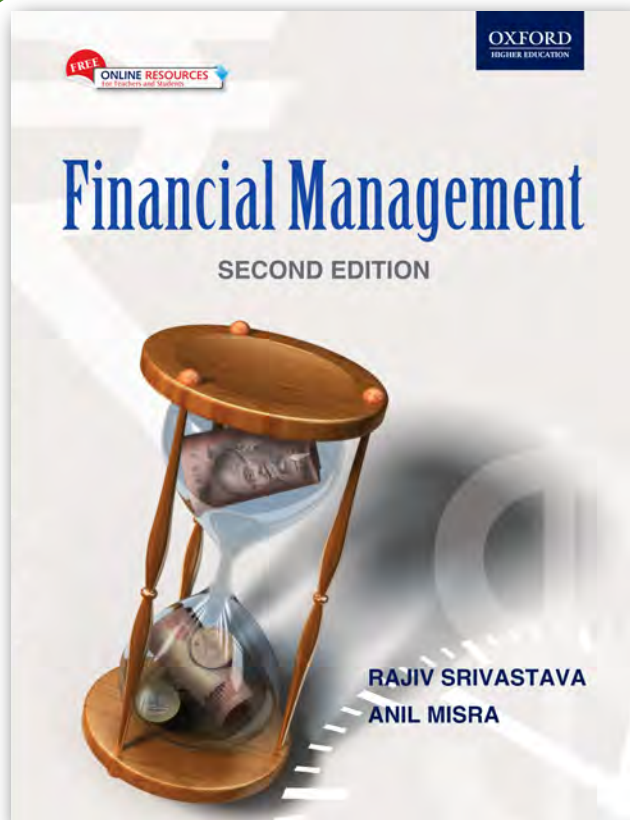
The book is structured into eight parts comprising 27 chapters. Part I covers the introductory aspects of this subject while Part II discusses the nuances of financial analysis, planning, and forecasting. Part III delves into valuation concepts. Parts IV and V deal with managing issues related to long-term assets and capital structure and dividend decisions, respectively. Part VI elaborates upon the theories and concepts of working capital management and Part VII discusses the possible sources of long-term financing. Financial management is a dynamic subject. With the changing business environment, new challenges are being faced by the managers. This book introduces and elaborates upon new areas such as liability management, corporate failures, and behavioural aspects of corporate finance. Part VIII covers six such special topics.

Key Features

- Explains the core concepts of financial management in a lucid manner, comprehensible to both beginners and established professionals
- Establishes the link between theory and practice in real world by including numerous solved illustrations, case studies, exhibits based on industry data, and annual reports of firms
- Explains the significance of using technological tools, especially spreadsheets in solving financial management issues
- Discusses the logic of financial management that facilitates financial decision-making
- Demystifies important issues, such as behavioural finance and liability management, faced by financial managers today

Arindam Banerjee is Associate Professor of Finance at Shiv Nadar University, Chennai. Prior to this, he worked as Faculty, department of Finance and Accounting at Birla Institute of Management Technology (BIMTECH), Greater Noida. He is a fellow of the Institute of Cost Accountants of India (ICAI-CMA) and a Certified Financial Planner (CFPCM). Prof. Banerjee has also acted as course reviewer for The Institute of Chartered Accountants of India.

eISBN: 9780199098859



Print ISBN: 9780198072072

Financial Management SECOND EDITION

The second edition of *Financial Management* is a comprehensive textbook specially designed to meet the requirements of management students specializing in finance. It deals with the core concepts of finance with an emphasis on specialized sub-areas, such as working capital, capital markets, investment decisions, international finance, derivatives, mergers and acquisitions, and risk management.

Apart from providing a basic understanding of the concepts in finance, the book covers extensively the newer financial instruments, such as futures, options, and swaps. With its detailed coverage of foreign exchange markets and related concepts, it will enhance the readers' understanding of a rapidly globalizing world.

Each chapter starts with an introductory case to sensitize the readers with the theme of the chapter and closes with case studies of well-known Indian companies to exemplify the concepts and issues discussed in the chapter. To facilitate the understanding of complex concepts in finance, the text in each chapter is interspersed with suitable examples, exhibits, and illustrations. The authors have tried to present the technical concepts of finance in a simple and succinct manner, yet keeping the inherent technicalities intact.

Users will find this book highly useful for its application of theoretical concepts explained through illustrative examples, relevant cases, and numerical problems.

Key Features

- Focuses on managerial applications through case studies of well-known Indian companies
- Carries a number of side-boxes that highlight the crux of key concepts discussed in each section
- Includes examples, exhibits, and illustrations interspersed in the text
- Contains review questions, practical assignments, numerical problems, and practice problems with each chapter

New to This Edition

- New sections on corporate debt restructuring and regulation of working capital finance
- Revised content related to corporate governance, economic value added, venture capital and private equity, long-term and short-term sources of funds
- Improved explanations of existing topics

Praise for the First Edition

'The book provides a comprehensive coverage of the required topics. It is an excellent addition to the books in the area of financial management.'

Dr Arya Kumar, BITS Pilani

'The book covers all possible topics that are required by Indian business schools.'

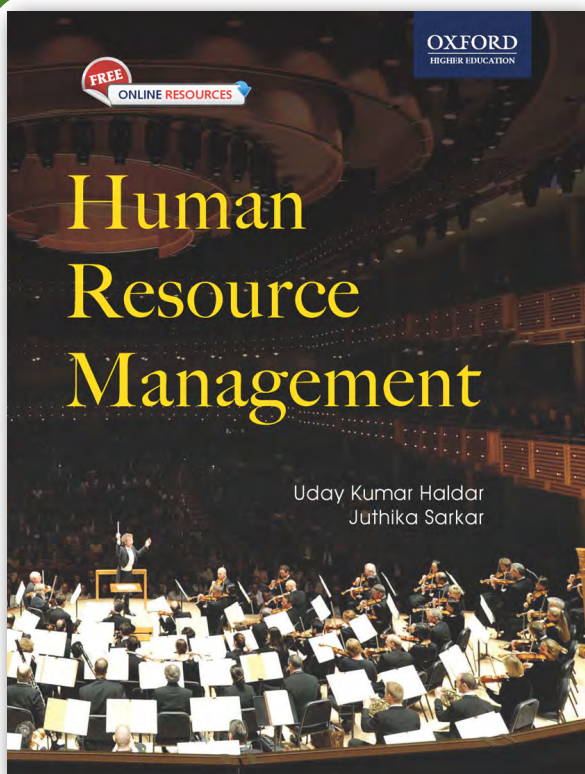
Prof. Ashok Malhotra, BIMT, Greater Noida

About the Authors

Rajiv Srivastava, MBA (International Finance), University of Pittsburgh, USA and MBA (Finance), University of Delhi, is working as visiting Professor at three IIM campuses (Amritsar, Rohtak, and Sirmaur). He has previously served as Professor with Indian Institute of Foreign Trade, Delhi and International Management Institute, Delhi. He has worked with several other large corporations in senior positions and has a wide experience spanning more than three decades. He is the author of *Derivatives and Risk Management* (OUP).

Anil Misra, Ph.D., is currently Associate Professor (Accounting & Finance) at Management Development Institute (MDI), Gurgaon. He was earlier Assistant Professor in Finance and Accounting with the Indian Institute of Foreign Trade, New Delhi. He has been actively conducting Executive Development Programmes for corporates. Dr Misra has to his credit several research papers published in national and international journals. He has also published a book on working capital management.

eISBN: 9780190993030



Print ISBN: 9780198076681

HUMAN RESOURCE MANAGEMENT

Human Resource Management (HRM) is a comprehensive textbook designed for the students of business management. It provides an in-depth coverage of the theoretical and practical aspects of managing human resources supported by numerous industrial examples, exhibits, and illustrations.

The book is divided into four parts. Part I, Inception, outlines the concept of HRM and provides an understanding of talent management and competency framework. Part II, HR Systems, covers the various HR functions such as manpower planning, recruitment, performance management system, development system, multi-source feedback, compensation management, and employee development. Part III, Contemporary Issues in HRM, elaborates on the current issues influencing human resources such as globalization, technology, HRD audit, corporate social responsibility, and ethics. The HR strategies being used in various sectors are also covered. Following this, Part IV, Research in HRM, provides a chapter on contemporary research findings on various issues in HRM. The book concludes with appendices on stress management, organizational climate and role stress, and leadership styles in organizations.

Comprehensive in its coverage of topics and with a lucid approach, the book also provides various examples and case studies, which serve as a valuable guide for professionals.

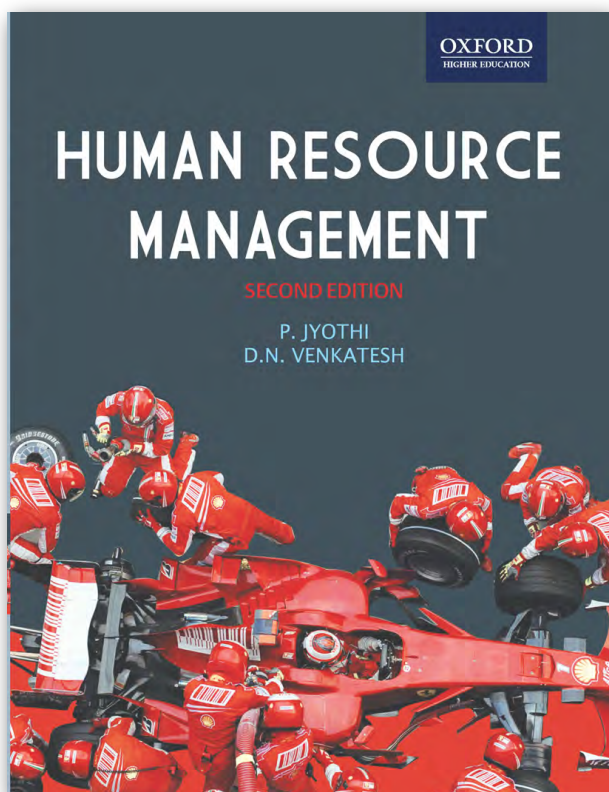
Key Features

- Includes numerous exhibits and examples to help readers relate to the concepts
- Covers various facets of HR systems including acquiring, retaining, and developing talent
- Dedicates a chapter exclusively to the contemporary research findings in the field of HRM
- Discusses HR strategies in different sectors such as manufacturing, service, and knowledge industry

Uday Kumar Haldar is the Principal of Swami Vivekananda Institute of Management and Computer Science, Kolkata.

Juthika Sarkar is an HR practitioner with more than 15 years of industry experience, including a decade in Siemens.

eISBN: 9780190992446



Print ISBN: 9780198074113

HUMAN RESOURCE MANAGEMENT **SECOND EDITION**

The second edition of **Human Resource Management**, designed to cater to the syllabi requirements of management students, is now interspersed with additions that make the title even more exhaustive. The text also covers related areas of human resource management (HRM), such as leadership and HR accounting and audit. With its comprehensive coverage of all the basic aspects of HRM, this new edition would also be useful for working professionals.

Key Features

- Explores emerging areas of HRM such as strategic HRM, knowledge management, HRM in international organizations, and corporate social responsibility
- Provides examples and exhibits for illustrating the key concepts of HRM
- Includes classroom-tested case studies from Indian and international organizations
- Provides objective type questions in the end-chapter exercises

New to This Edition

- Three new chapters on strategic HRM, e-HRM, and international HRM
- New sections such as organizational structure, HRM practices in India, cultural diversity and work-life balance, selection practices in India, outplacement, resignation, voluntary retirement scheme, superannuation, potential appraisal, grievance and its settlement machineries, and quality circles
- New features such as multiple choice questions and fill in the blanks at the end of the chapters
- Nineteen new case studies

Praise for the First Edition

Users will find this book useful for its integrated and reader-friendly approach.

—Dr R.K.S. Mangesh Dash, IMIS, Bhubaneswar, Odisha

The breadth and depth of the topics presented in the text is impressive.

—T.K. Goon, TAG Solutions, New Delhi

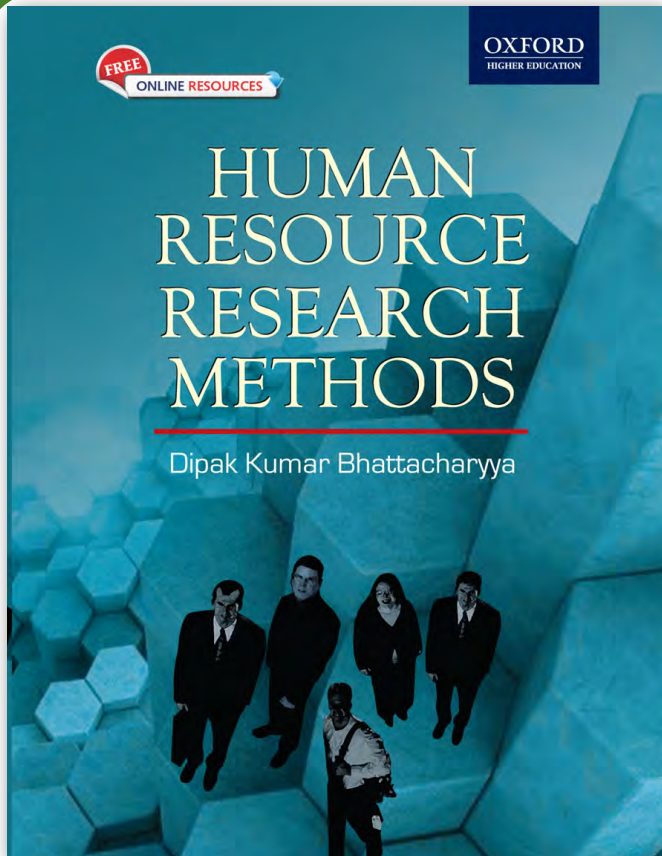
P. Jyothi, PhD, is Reader, School of Management Studies, University of Hyderabad. She has more than two decades of teaching experience in HRM and organizational behaviour at the postgraduate level. Dr Jyothi has extensive experience in training and consultancy, and has published several research papers in leading journals.

D.N. Venkatesh, PhD, is a consultant in the areas of HRM and organizational development. Prior to this, he worked as Manager, HR and Administration, Institute for Development and Research in Banking Technology (IDRBT), Hyderabad. Dr Venkatesh has more than a decade of professional experience in the field of HRM, particularly in the banking and information technology sectors.

eISBN: 9789391050580



TOC list



Print ISBN: 9780195689105

HUMAN RESOURCE RESEARCH METHODS

Human Resource Research Methods is a comprehensive textbook specially designed to meet the needs of management students specializing in HR. It addresses the research aspect of HR and explains its various concepts, supplementing them with illustrations, cases, and exercises.

The book provides in-depth coverage of the concepts, tools, and techniques of HR research—its theoretical foundations, qualitative and quantitative aspects, performance metrics—and the use of factor analysis and Six Sigma in HR. Among other topics discussed are questionnaire design, training and development research, and organizational culture and development.

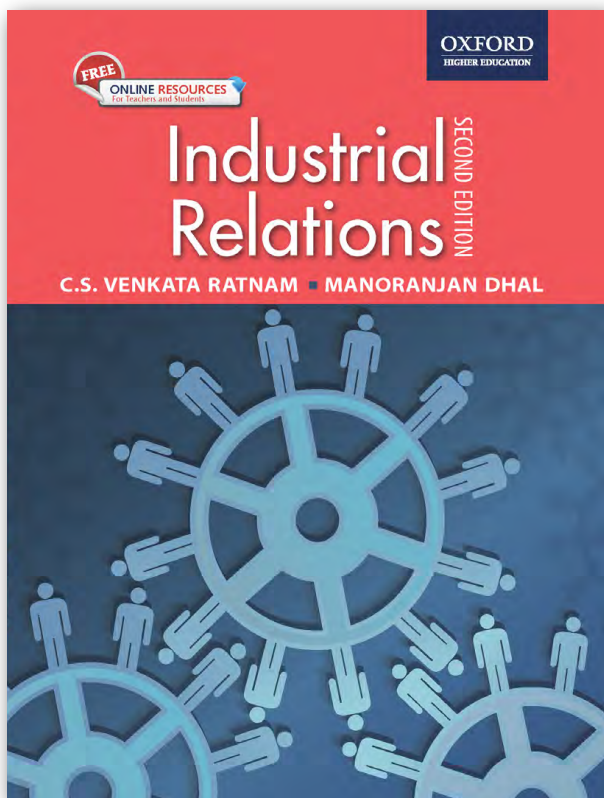
Users will find this book highly useful for its coverage of the key aspects of HRRM explained through examples, cases, tables, and diagrams.

Key Features

- explores the issues dealing with research requirements by using statistical, psychometric, and mathematical tools and techniques in each chapter
- provides chapter-end exercises with review questions and case studies
- aims to provide organizational decision-making insights to the reader

Dipak Kumar Bhattacharyya, is Professor (OB/HRM), Xavier Institute of Management, Bhubaneswar. Formerly Dean at the Indian Institute of Social Welfare and Business Management, Kolkata, he has over two decades of experience in teaching human resources at the postgraduate level. Dr Bhattacharyya has also served as Director, Institute of Engineering and Management, Kolkata, and Director, Centre for Management Education, All India Management Association, New Delhi. He has more than 15 years of professional experience in the area of human resources, and is active in training and consultancy.

eISBN: 9780190991012



Print ISBN: 9780199456550

Industrial Relations

SECOND EDITION

The second edition of the well-accepted title *Industrial Relations* continues to provide a comprehensive coverage of the various aspects of industrial relations: conceptual foundations, institutional structure and policy framework, role of the government, and trade unions.

The book introduces readers to the various approaches to industrial relations and goes on to discuss trade unions, collective bargaining, and tripartism. It goes on to highlight the importance of dispute resolution, labour administration, grievance handling, and the management of industrial relations.

Key Features

- A comprehensive title that integrates all aspects of industrial relations
- Includes case studies and exhibits to illustrate the theory discussed in the chapters

New to This Edition

- Sections on the crisis in industrial relations, emerging dynamics in industrial relations, origin of trade unions and developments during post-recession era, international trade unions, detailed coverage on Employee Compensation Act, 1923, Employees' State Insurance (ESI) Act, 1948, Factories Act, 1948, Kerala Recognition of Trade Union Act, 2010, Indian Labour Conference, minimum wages, and more
- Updated and revised data, and latest amendment to labour laws
- Additional sections on labour laws

Praise for the First Edition

Prescribed read for those at both ends of IRI!

—The Hindu Business Line

C.S. Venkata Ratnam was the Director, International Management Institute, New Delhi.

Manoranjan Dhal is Associate Professor, Organizational Behaviour and Human Resources, at IIM Kozhikode.

eISBN: 9780199094295



Print ISBN: 9780198080985

INNOVATION MANAGEMENT

Innovation Management is a comprehensive textbook designed to meet the needs of postgraduate management students. The book aims to capture the essence of innovation in the dynamic business environment.

The foundation of all successful companies has been the practice of innovation. This book is universal in its approach and integrates both macro and micro perspectives of innovation, especially from the context of emerging economies. It provides a unique treatment of continuity and change as a dynamic process of evolution in managing innovation. It also deploys a multidisciplinary approach combining knowledge and experience of the authors in the domains of knowledge management, technology management, strategy, and entrepreneurship.

Besides students, the book will also be a useful tool for practitioners, consultants, entrepreneurs, and policy makers.

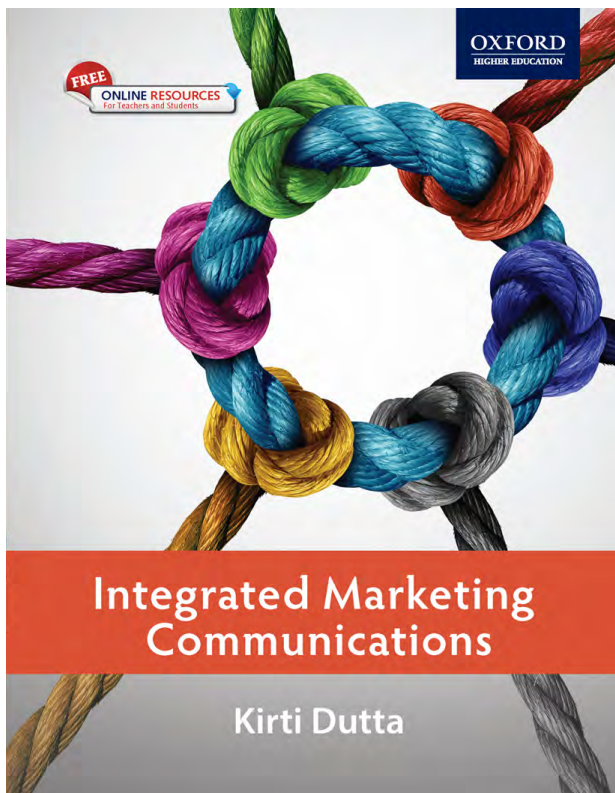
Key Features

- Provides a holistic framework for innovation integrating contexts of developed and developing economies
- Links the concepts of innovation to the socio-economic environment and demonstrates the paradigms across various geographical regions
- Includes unique topics such as corporate entrepreneurship, open innovation approach, role of venture capital, and industry-academia partnership
- Discusses innovation practices of firms such as Procter and Gamble, Apple, Samsung, Nokia, ITC, Marriott, and Reliance
- Includes numerous cases of companies such as Google, Facebook, Hewlett-Packard Open Labs, and McDonald's

Vinnie Jauhari is Director, Education Advocacy, Microsoft Corporation India Pvt. Ltd, Gurugram. Formerly, she was Director, Institute for International Management and Technology (IIMT), Gurgaon. She has over 15 years of academic experience and was earlier Region Lead of HP Labs Open Innovation Office for India.

Sudhanshu Bhushan, formerly Professor, IIMT, is now Director, Convergence Management Advisors, Gurgaon. Earlier, he was Associate Dean, GD Goenka World Institute; and Founder Director, J.K. Padampat Singhania Institute of Management and Technology, Gurgaon.

eISBN: 9780190992231



Print ISBN: 9780199464852

Integrated Marketing Communications

Integrated Marketing Communications is a concise textbook designed to meet the needs of postgraduate management students specializing in marketing. With numerous industry examples, exhibits, and case studies, the book captures all aspects of marketing communications for readers to understand the processes and usage of effective communication.

The book begins with an introduction to the concept of integrated marketing communications and the conducive environment for it. The book then goes on to discuss the marketing communication tools, such as advertising, sales promotion, direct marketing, personal selling, publicity and public relations, and the need for an IMC approach. The impact of new media is also covered with special focus on online advertising and mobile marketing. Important strategic aspects such as corporate image management, brand building, and integration of global marketing communication along with the ethical and social perspectives have been discussed at length too.

Besides management students, practitioners will also find this book very useful for its practice-oriented approach.

Key Features

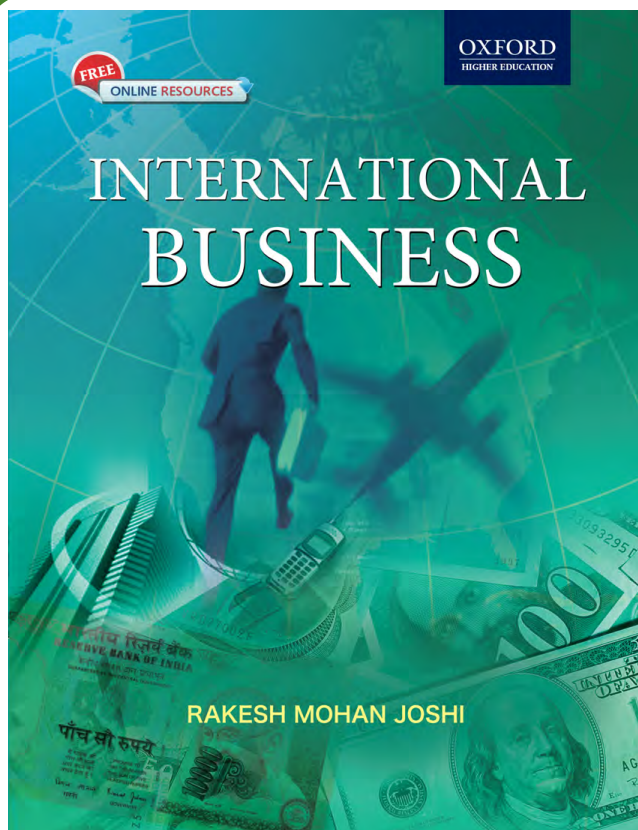
- Introduces the current trends and best practices and bases them on a sound theoretical background
- Provides various industry insights and IMC practices of Indian and global companies
- Includes exclusive chapters on point of purchase advertising, hiring and motivating sales force, mobile marketing, corporate image management, and brand building
- Highlights emerging issues such as customer service, media management, media buying, event and sponsorship management, and online and mobile advertising

Kirti Dutta is Professor (Marketing), School of Entrepreneurship, Rishihood University, Sonapat.

eISBN: 9780199098873



TOC list



Print ISBN: 9780195689099

INTERNATIONAL BUSINESS

International Business is a comprehensive and application-oriented textbook especially designed to meet the requirements of management students. It brings out the key concepts of international business in a simple and lucid manner, with numerous practical managerial examples, vignettes, diagrams, flowcharts, and illustrations to facilitate and reinforce learning.

Beginning with an overview of globalization and international business, the book discusses in detail the various theories of international trade, international trade patterns, the institutional framework, the World Trade Organization, and international economic integrations. It goes on to discuss international cultural, political, and legal environments and the policy framework for international trade. It further elucidates country evaluation and selection, the modes of international business expansion, foreign direct investment, and multinational enterprises. Finally, it explicates the key functional areas of international business and concludes with separate chapters on contemporary issues.

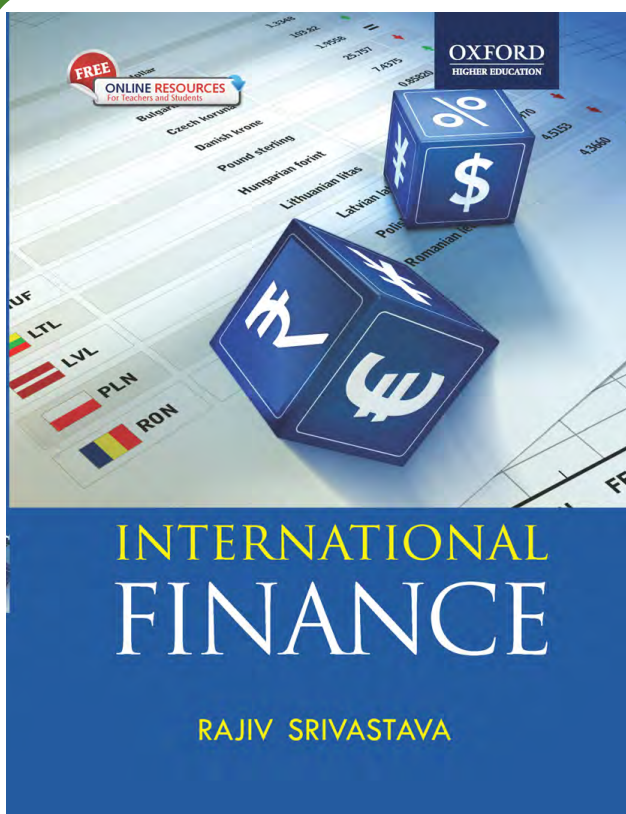
This book, with its wealth of useful information, managerial focus, and integrated multi-disciplinary approach, would be useful to management students and global managers alike. It will also be valuable for a wide range of courses on international business such as global business environment, international management, global business strategy, export-import management, international trade operations and logistics, export marketing, and international economics.

Key Features

- Elucidates major functional areas of international business such as international marketing, international finance, global operations and supply chain management, global human resource management, and international trade procedures and documentations
- Explores contemporary issues in international business such as e-business, ethics, and corporate social responsibility
- Provides chapter-end summary, key terms, concept review questions, and critical thinking exercises and suggests interesting classroom assignments and field projects
- Contains numerous examples and case studies in the global and Indian context (ONGC, Ranbaxy, FDI in the Indian automobile sector, etc.)

Dr Rakesh Mohan Joshi is Professor, International Business and International Marketing, and Chairperson, International Collaborations and Research, Indian Institute of Foreign Trade, New Delhi. He has over two decades of teaching, consultancy, and training experience in international business and marketing. He has had extensive transnational exposure in the field of international business and has been associated with several multilateral organizations such as the World Bank and the Asian Development Bank. Besides several other approvals, his case studies have been selected by London Business School. He has authored numerous research papers in leading journals and is the author of *International Marketing* (OUP).

eISBN: 9780190993306



Print ISBN: 9780199453597

INTERNATIONAL FINANCE

International Finance is a comprehensive textbook designed to meet the requirements of postgraduate management students specializing in finance. It deals with the dynamics of the global financial system, international monetary systems, balance of payments, exchange rates, foreign direct investment, and their relation to international trade.

The book is divided into six parts. Part I, International Economic Environment, explains the working of a multinational firm in an international environment, balance of payments, international monetary systems, and exchange rate systems. Part II, Foreign Exchange Markets and Equilibrium, covers the nature of foreign exchange markets and theories for determining the exchange rates in the market. This part also elaborates on international parity conditions such as the law of one price and the Fisher effect. Part III, Foreign Exchange Derivatives, gives an insight into currency forwards, futures, options, swaps, and interest rate derivatives. Part IV, Foreign Exchange Risk Management, covers transaction, translation, and economic exposure along with political risk in the financial markets. Part V, International Financial Markets and Controls, explains cost of capital, its structure, and international capital budgeting. Foreign direct investments and capital controls influencing the markets are also discussed in this part. Finally, Part VI, Multinational Financial Management, deals with international trade finance, transfer pricing and international accounting, and taxation.

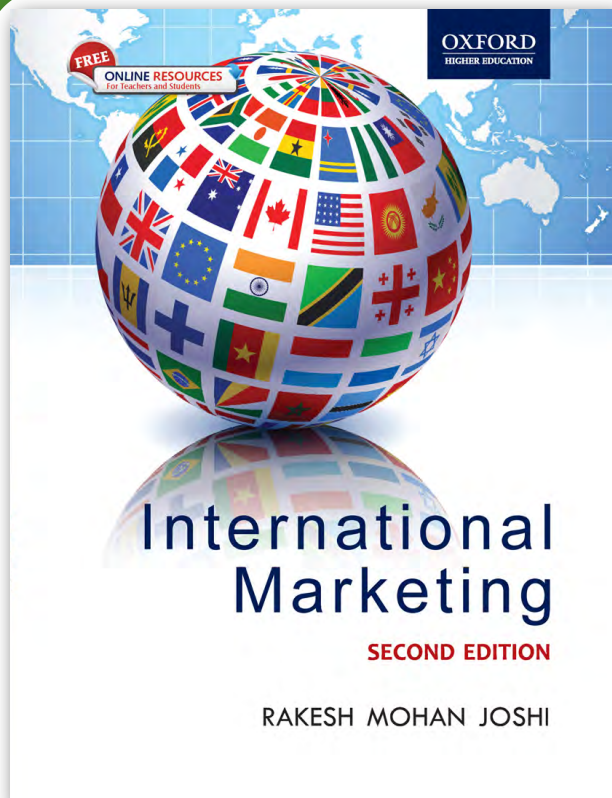
Owing to its comprehensive coverage and real-life examples, exhibits, solved exercises, and graphs, students as well as young professionals will find this book equally useful.

Key Features

- Includes latest environment and regulatory changes in the Indian economy and financial markets for international operations
- Discusses in detail the implications of international activities on accounting and taxation in India
- Includes exhibits in every chapter to illustrate substantive practical applications of concepts and techniques of international finance

Rajiv Srivastava is working as visiting Professor at three IIM campuses (Amritsar, Rohtak, and Sirmour).

eISBN: 9780199094509



International Marketing

SECOND EDITION

RAKESH MOHAN JOSHI

International Marketing

SECOND EDITION

International Marketing, Second Edition is an exhaustive textbook designed to cater to the syllabi requirements of management students. Written in a student-friendly style, the book takes a detailed look at the domain of international marketing. This would give the readers keen insights into overseas markets. The text provides comprehensive coverage of all the basic aspects of international marketing. Coupled with ample coverage of topics and a wide variety of examples, exhibits, and illustrations, the book goes on to develop managerial acumen in students. Beginning with an overview of international marketing concepts, the book discusses in detail the identification of emerging marketing opportunities, the environment, decision-making processes, and entry mode strategies of international marketing. It further elaborates on advance topics such as product strategy, brand building, pricing decisions, and communication decisions. These are followed by a detailed discussion on various topics of export-import management.

Key Features

- Provides a thorough understanding of the basic concepts of international marketing
- Includes pedagogical features such as exhibits, chapter-end questions and problems, project assignments, key terms, and a recapitulation of the topics covered

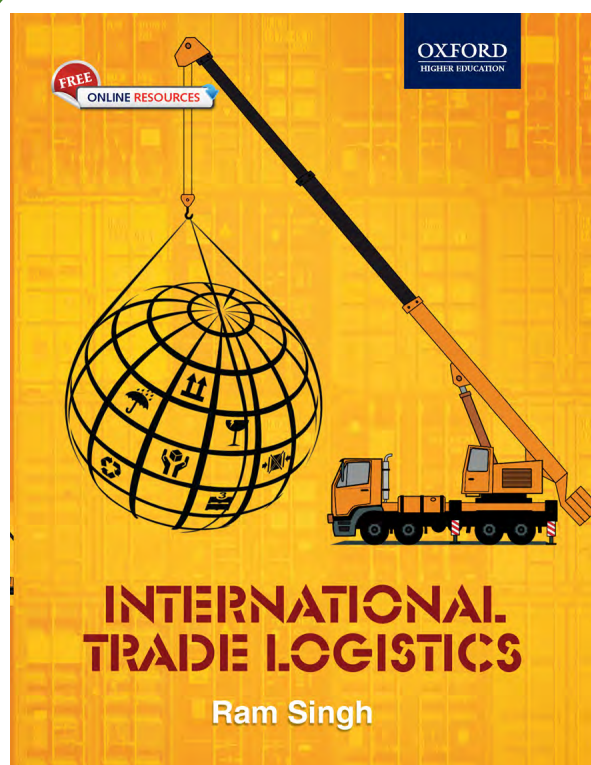
New to This Edition

- Six new chapters on international political and legal environment, international cultural environment, trade logistics and international shipping, modes of payment and international trade finance, managing risks in international trade, and global e-marketing
- New sections such as international logistics, India's international shipping activities, terms of payments in international transactions, types of credit according to methods of payments, availability of credit, WTO compatibility of India's trade finance and insurance schemes, and India's competitiveness and ICT
- Updated cases on Essel Propack, BRICS, homologation of motor vehicles in international markets, emerging opportunities in international dairy trade and India, identifying international marketing opportunities in medical services, pricing medicines—profits, patents, and poor customers—IOC's internationalization strategy, and building formidable Indian brands in diamond-jewellery market

Rakesh Mohan Joshi is presently Professor, International Business and International Marketing, and Chairperson, International Collaborations and Research, Indian Institute of Foreign Trade, New Delhi.

Print ISBN: 9780198077022

eISBN: 9780199094431



INTERNATIONAL TRADE LOGISTICS

Ram Singh

INTERNATIONAL TRADE LOGISTICS

International Trade Logistics is designed as a textbook for students of postgraduate management programmes specializing in international business. It will also be useful for students specializing in operations. The book provides extensive coverage of the logistics infrastructure of India's foreign trade system.

Beginning with an overview of India's trade scenario, the book provides an in-depth discussion on the factors affecting the choice of mode of transport, information and order processing in trade logistics, functions of packing and packaging, labelling and marking, inventory, and warehouse management, unitization, palletization, and stowing of cargo. It also discusses the role of inland container depots (ICDs) and container freight stations (CFSs) in trade logistics as well as incoterms. A brief overview of India's transport infrastructure, such as land, air, and ocean transportation, is provided. Special emphasis is laid on ocean transportation such as containerization, liner, and tramp shipping, freighting principles, and Indian shipping. The concept of multimodal transportation is also dealt with in detail. The book also provides extensive coverage of documentation practices, risks in international trade, marine insurance and claim procedure, role of intermediaries, and maritime fraud.

A rich pedagogy that includes numerous tables, illustrations, exhibits, and case studies add value to the book. Numerous multiple choice questions and review questions at the end of every chapter will help the students test their understanding of the concepts covered in this book.

Key Features

- Provides comprehensive coverage of the various facets of international trade logistics (ITL)
- Incorporates the latest data and procedural information in the field of ITL
- Lays special emphasis on ocean transportation
- Provides case studies on various functional aspects of international trade such as third party logistics and role of reverse logistics, as well as sector-specific cases such as the challenges and opportunities for India's liner shipping industry

Ram Singh is Associate Professor, International Trade Operations and Logistics, Indian Institute of Foreign Trade, New Delhi. With a PhD in international business, he has more than 15 years of experience in both industry and academia.

Print ISBN: 9780199455454

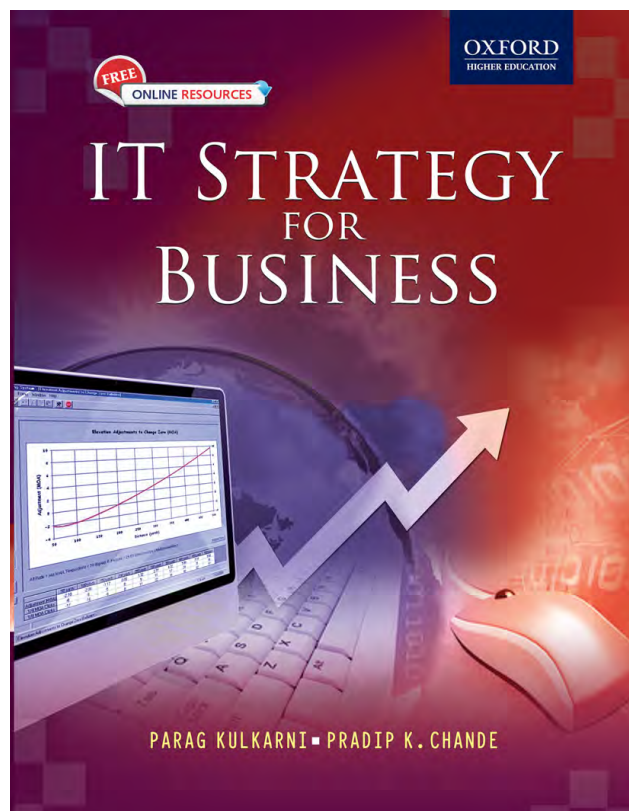
eISBN: 9780190992316



TOC list



20



Print ISBN: 9780195694475

IT STRATEGY FOR BUSINESS

IT Strategy for Business is a comprehensive textbook designed to meet the requirement of MBA students specializing in Information Technology or Systems. The book positions IT as a strategic business tool and knowledge catalyst. Based on original research by the authors, it introduces various aspects of IT strategy and business strategy, and stresses upon the strategic use of IT for building competitive advantage. The book explains how a firm can strike a perfect balance between technology and business, and gives a practical insight into IT strategies for all kinds of enterprises, including those that specialize in Information Communication Technologies (ICT) or offer related goods and services. Among the important topics discussed are: IT management, e-strategies, outsourcing and offshoring, knowledge management, and various stages and facets of IT strategy implementation. The book also explicates the role of IT in important emerging areas, such as mergers and acquisitions and IT security. The book would be useful to all those involved in management, strategy development or IT-related activity management. It is also a veritable guide for business leaders and corporate managers to envision and build IT strategies for their respective organizations.

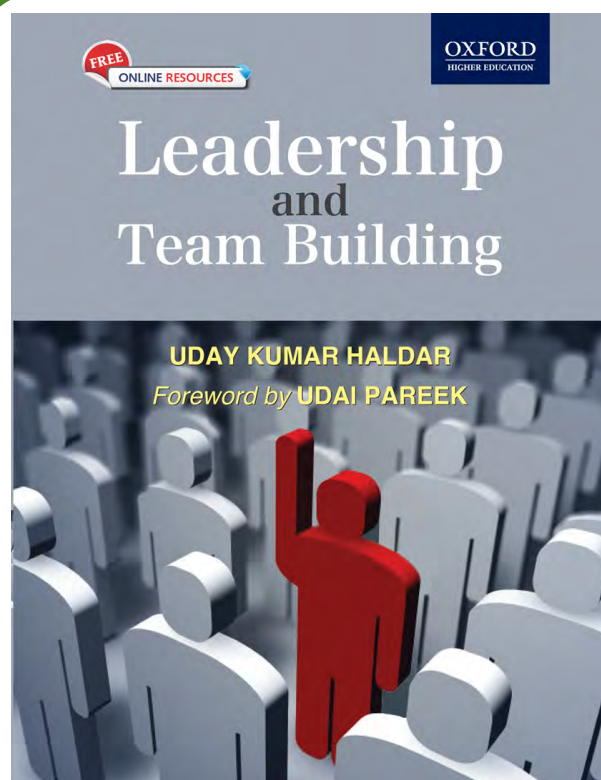
Key Features

- Contains discussions on IT strategies for IT and non-IT companies, as also in specific scenarios
- Includes tables, flowcharts, and illustrations to complement the text
- Includes quotations, examples, and case studies from global and Indian companies at relevant places to emphasize the significance of positioning IT as a strategic tool
- Provides end-chapter questions that focus on critical thinking, exercises, and project work to enhance conceptual understanding and hone management skills

Parag Kulkarni is Director and Chief Scientist, Anomaly Solutions, Pvt. Ltd, Pune. An alumnus of Indian Institute of Management Kolkata and Indian Institute of Technology Kharagpur, he has been a visiting faculty at IIM Indore, various IITs, Pune University, National Institute of Construction Management and Research (NICMAR), and Symbiosis, Pune. During his more than two decades of experience in the IT industry, Dr Kulkarni has been instrumental in building world class IT companies. He has served in several reputed IT companies such as Siemens, IDEaS, and Reasonedge. Dr Kulkarni has to his credit more than 50 international publications and two patents pending in US PTO.

Pradip K. Chande, PhD, formerly Professor, Information Systems at IIM Indore, has more than three decades of experience in teaching, research, consultancy, and industry. He has served as Director, Maulana Azad National Institute of Technology, Bhopal. He has also worked as head of Shri GS Institute of Technology and Science, Indore and as Corporate Head, Mahindra British Telecom Limited, Pune. He has also been a visiting Professor at Kumamoto University, Japan. Dr Chande has published more than 80 research papers, and is a recipient of several national and international awards.

eISBN: 9780199085095



Print ISBN: 9780198062578

Leadership and Team Building

Leadership and Team Building is a comprehensive textbook designed to meet the needs of postgraduate management students specializing in human resource management. Written in an accessible, student-friendly style, the book explains the application of theoretical concepts through numerous illustrative examples, flowcharts, diagrams, and case studies.

The two major themes of the book—leadership and team building—are covered in twelve well-integrated chapters. Each chapter opens and closes with an organization-specific case study to help readers focus on the topic and broaden their understanding of business practices. Beginning with a conceptual background on leadership and perspectives on effective leadership behaviour, the book moves on to the theories of effective leadership and contemporary leadership styles. The concepts of motivation, satisfaction, and performance are also addressed in detail. This is followed by discussions on leadership behaviour and development. Team building is discussed in chapters on essentials of building and managing teams and team effectiveness. Various research findings, training programmes, and team-building activities and outcomes are also covered. The book aptly ends with appendices on followership and the biographies of various successful international and national leaders.

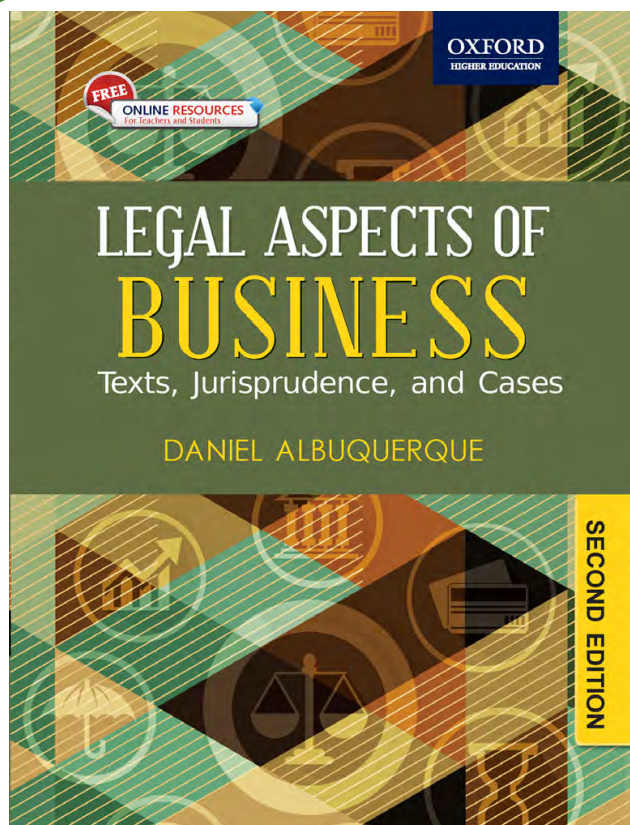
Key Features

- Provides in-depth coverage and analysis of leadership models and theories
- Includes contemporary researches on leadership
- Contains a chapter on team-building activities and their outcomes
- Includes an in-depth write up on national and international leaders

Uday Kumar Halдар is presently Principal at the Swami Vivekananda Institute of Management and Computer Science, Kolkata. Prior to this, he was a Professor at Camellia School of Business Management, Kolkata. He has also been associated with the Indian Institute of Social Welfare and Business Management (IISWBM), Kolkata, and has served as the Director of the Ordnance Factories Institute of Learning, Ishapore. He is also the author of *Human Resource Development* and *Leadership and Team Building*, both published by OUP.

eISBN: 9780190992453





Print ISBN: 9780199463169

LEGAL ASPECTS OF BUSINESS

SECOND EDITION

The second edition of *Legal Aspects of Business: Texts, Jurisprudence, and Cases* is a comprehensive textbook designed especially for postgraduate students of business management. It presents a complete, all-inclusive jurisprudence and supplements the concepts with numerous cases, exercises, and profiles of legal luminaries.

The book is divided into six parts. Part I introduces the reader to *Business Jurisprudence*. As the contract law is foundation to all business laws, Part II, *Commercial Jurisprudence*, on Mercantile Law, discusses the Indian Contract Act, 1872, and its features at length. The Sale of Goods Act, 1930, the Negotiable Instrument Act, 1881, the Indian Partnership Act, 1932, the Companies Act, 2013, and the Competition Act, 2002, are also covered in depth. Part III, *Financial Jurisprudence*, covers the laws related to finance and banking at length. Part IV, *Labour and Industrial Jurisprudence*, covers the laws related to wages, workers' social security, and industrial relations. Part V, *Aspects of New Economy and Jurisprudence*, throws light on laws related to information and communication, intellectual property rights, and environment protection. Part VI, *Judicial and Social Jurisprudence*, is devoted to business and criminal liability and basic rights and business.

This book also offers valuable insights to practitioners to arrive at legally sound decisions in various business situations.

Key Features

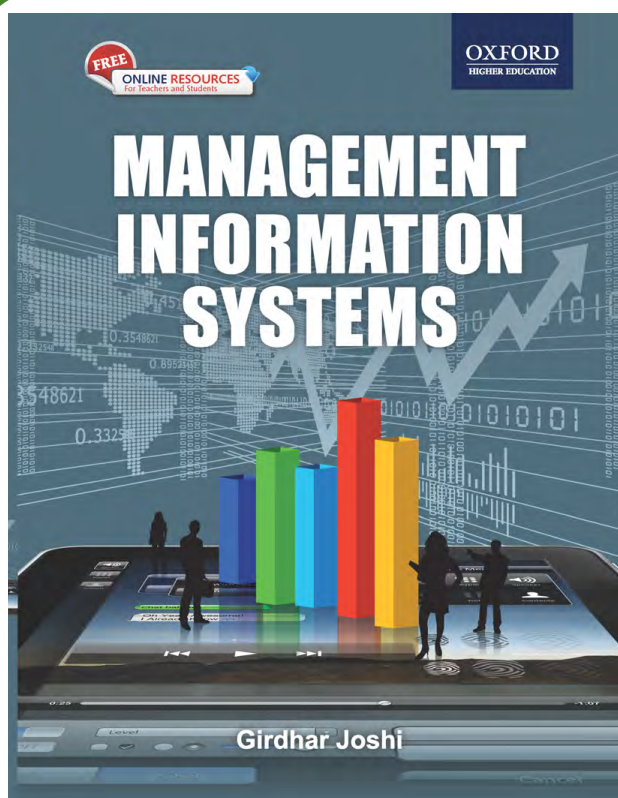
- Includes Texts that provide direct acquaintance with legal language
- Contains numerous *real and abridged* cases to provide a crisp and vivid legal experience of court proceedings
- Provides *Manager's Takeaways*, which highlight key learning points to facilitate legally sound decision-making
- Includes a variety of practice-oriented exercises, such as *Development of Legal Edge* and chapter-end cases
- Presents inspiring role models in the *Legal Luminary* section

New to this edition

New chapters providing a comprehensive coverage of the Companies Act, 2013

Daniel Albuquerque, PhD, is the director of *Alternative tech Foundation (AtF)* of *Biodiversity Conservation India Ltd (BCIL)*, Bengaluru. Dr Albuquerque's experience spans across academic, corporate, political, and cultural fields both in India and abroad. He is associated with many management institutes in India and is a visiting professor at the Friedrich Schiller University, Jena, Germany.

eISBN: 9780199098880



Print ISBN: 9780198080992

MANAGEMENT INFORMATION SYSTEMS

Management Information Systems is a comprehensive textbook designed to meet the needs of postgraduate management students. The book elaborates on how information systems (IS), supported by information technology (IT), help businesses gain competitive advantages and meet corporate objectives.

Divided into five parts, the first part, *Concepts and Structure of MIS*, discusses the basic concepts of IS, strategic advantages of IT, and corporate decision-making. The second part, *IT Infrastructure*, covers the various hardware, software, database, and telecommunication components. The third part, *IS Applications*, throws light on enterprise applications, enterprise systems, and electronic commerce. Special care has been taken to explain decision support systems, knowledge management, and intelligent systems. The fourth part, *Development of MIS*, underlines IS planning and the development and implementation of IT solutions. The last part, *Management and Challenges of MIS*, touches upon the societal impact of IT, security aspects, and explains IS in the context of managing global businesses.

With its problem-solving approach and user-friendly presentation, the book will be useful to management students as well as professionals.

KEY FEATURES

- Covers the latest developments in the IT arena and correlates them with problem-solving in the modern business world
- Includes emerging platforms and technologies such as mobile computing and m-commerce to widen the scope of IT in business management
- Includes case studies and business problems from companies such as Archies, Infosys, Wipro, Amul, ONGC, Maruti Udyog, Videocon, Snapdeal.com, Titan Industries, etc., that illustrate practical situations encountered in the real business world
- Provides project work under the section *MIS Development* that helps readers understand the use of IT tools for business decision-making

Girdhar Joshi is Director and Principal Consultant at BNG Infotech, Mumbai. In addition, he is a guest faculty at Indian Retail School and Pearl Academy of Fashion, New Delhi. He holds an MBA degree, with specialization in information technology and marketing. Having over 25 years of work experience in the fields of IT consulting and solution implementation, he has headed several IT organizations that provide technology solutions to various types of companies—manufacturing, logistics, and retail being some of them. He has also written *Information Technology for Retail*, published by Oxford University Press, India.

eISBN: 9780190992323



TOC list

OXFORD
 HIGHER EDUCATION

MANAGERIAL ECONOMICS

SECOND EDITION

Suma Damodaran

MANAGERIAL ECONOMICS

SECOND EDITION

The second edition of *Managerial Economics* is a comprehensive textbook specially designed to meet the requirements of management students. Introducing students to the related economics in business decision-making, this text now provides more simplified explanations of the fundamental concepts and principles of managerial economics. In an attempt to better bridge the gap between economic theory and application, the revised edition is now enhanced and supported with several new exhibits, cases, and illustrations.

Beginning with an overview of managerial economics, the book discusses in detail the key concepts such as demand analysis, demand estimation and forecasting techniques, the firm as a producer, the production function, and production costs. It goes on to discuss market conditions, such as perfect competition, monopoly, monopolistic competition, and oligopoly, special pricing practices, markets for factor inputs, long-term investments and risk analysis, and externalities and public goods. Finally, it discusses macroeconomic aggregates and provides insights into fiscal and monetary policies.

Addressing the challenges faced by business organizations, the text explores emerging issues in managerial economics, such as the economics of information and the new economy.

New to This Edition

- separate chapters dealing exclusively with demand and supply
- sections dealing with applications of indifference curves, downward sloping industry supply curve, global firms, factors of land and capital, etc.
- cases on demand and elasticity, cost estimation, analysis and estimation of costs, alternative pricing practices, etc.
- appendices on functions, differential calculus, and discounting; constrained optimization; and linear programming
- user-friendly features, such as sidebars and definitions, to facilitate easy recall

Suma Damodaran, PhD, is Professor of Economics at XLRI, Jamshedpur. Formerly a faculty at the Indian Institute of Management Kozhikode, she has over two decades of experience in teaching. Dr Damodaran's research and consultancy interests are in the areas of managerial economics and industrial economics.

Print ISBN: 9780198061113

eISBN: 9780190992217

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 ONLINE RESOURCES
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MANAGING RETAILING


 3rd
 Edition

 Piyush Kumar Sinha
 Dwarika Prasad Uniyal

 3rd
 Edition

MANAGING RETAILING

The third edition of *Managing Retailing* is a comprehensive textbook designed to meet the needs of postgraduate management students specializing in marketing. Based on original research, it provides an in-depth coverage of retailing theory and explains the key concepts through numerous illustrations, examples, exhibits, tables, figures, and cases.

The text provides a detailed understanding of the current retail scenario in India, and other developing countries in Asia as well as other continents. It goes on to explore shoppers' behaviours and the phenomenon of shopping, retail store formats, online retailing, store location, category management, and supply chain management. Finally, it describes retail buying, store layout and design, retail marketing, point of purchase communication, pricing strategies and policies, store loyalty, and technology in retailing.

With its comprehensive coverage, approach, and real-life case studies, this book would also be useful for professionals in managing day-to-day retail operations.

New to this Edition

- Extensively revised text and up-to-date data
- New chapter on Online Retailing with an overview of the growing online retail industry
- Real-life cases on Bigbasket.com, Samsung Electronics in India, and Hippo on Twitter
- New sections such as foreign direct investment (FDI), private label brands, third party logistics/warehousing, social media marketing, and new in-store technologies and retailing through mobile

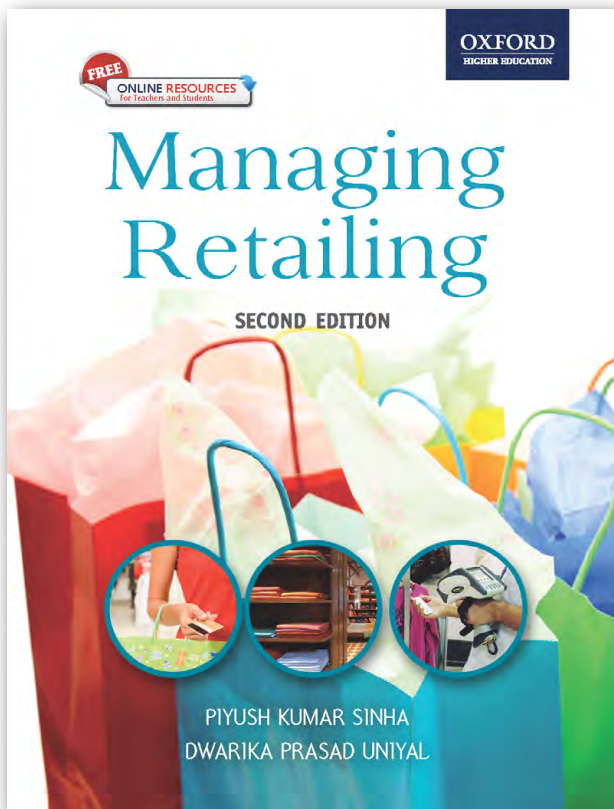
Piyush Kumar Sinha is Director, CRI Advisory and Research, Ahmedabad. He has over 30 years of academic and industry experience.

Dwarika Prasad Uniyal is Assistant Dean, Executive Education, Indian Institute of Management, Kashipur (Dehradun campus). He has over 20 years of academic and industry experience.

Print ISBN: 9780199488827

eISBN: 9780199098828





Print ISBN: 9780198075943

Managing Retailing

SECOND EDITION

The second edition of *Managing Retailing* is a comprehensive textbook designed to meet the needs of postgraduate management students. Based on original research, it provides an in-depth coverage of retailing theory and explains the key concepts of retailing through numerous illustrations, examples, exhibits, tables, figures, and case studies.

Beginning with a historical overview of retailing and a discussion on the theories of retail evolution, the book discusses the opportunities and challenges faced by retailers in India and other developing countries in Asia, as well as the current scenario of the retail industry in other continents. It goes on to discuss shoppers and the phenomenon of shopping, retail store formats, store location, category management, and supply chain management. Finally, it discusses retail buying, store layout and design, retail marketing, point of purchase communication, pricing strategies and policies, store loyalty, the shop as a social construct, and technology in retailing.

With its comprehensive coverage and approach, and real-life case studies, this book would also be useful for professionals in managing day-to-day retail operations.

New to the Second Edition

- New chapter on retail marketing
- New case studies on Woolworths Limited, Niranlar Agrasar, and Infibeam
- Data updated throughout the book
- New sections on rural marketing, foreign direct investment in retail, retail inventory management, negotiations in retail, and impact of pricing strategy on formats

Praise for the First Edition

This book is very lucid, gives crisp treatment to most topics and is suited for Indian students of retailing.

— Leela Rani, Assistant Professor, BITS Pilani

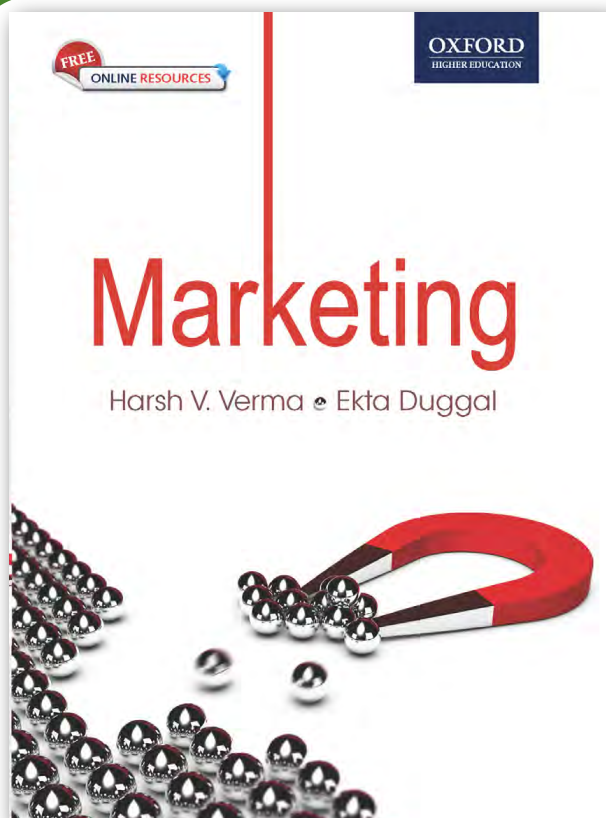
Indian case studies are an important benefit of the book. Some portions of the text are not available in other textbooks ... especially those pertaining to the Indian scenario. Reflections on evolution of retail theory are differently treated.

— Paromita Goswami, Associate Professor, Xavier Institute of Management Bhubaneswar

Piyyush Kumar Sinha, Professor, Marketing, and Chairperson, Centre for Retailing, Indian Institute of Management Ahmedabad (IIMA), has over 30 years of academic and industry experience.

Dwarka Prasad Uniyal is Professor of Management, and Director, National Centre for Leadership Development and Competency Assessment, Lal Bahadur Shastri National Academy of Administration, Mussoorie.

eISBN: 9780199084296



Print ISBN: 9780199459100

Marketing

Marketing is a textbook designed to meet the requirements of the students of both business management and commerce for a core course in marketing. It explains the concepts with the help of numerous examples and cases.

The book begins with an introduction to the subject and goes on to elaborate on the marketing processes. Next, it analyses marketing environment, consumer needs, and consumer behaviour, which is followed by a discussion on market segmentation and target selection. The book subsequently elaborates on product positioning, product decisions, and product development. It also covers the concepts and applications of pricing decisions, promotion, advertising, personal selling, and distribution functions. It concludes with analyses of marketing in organizations, new developments, and specialized fields in marketing.

Besides students, the book with its application-oriented approach would also be useful to marketing professionals.

Key Features

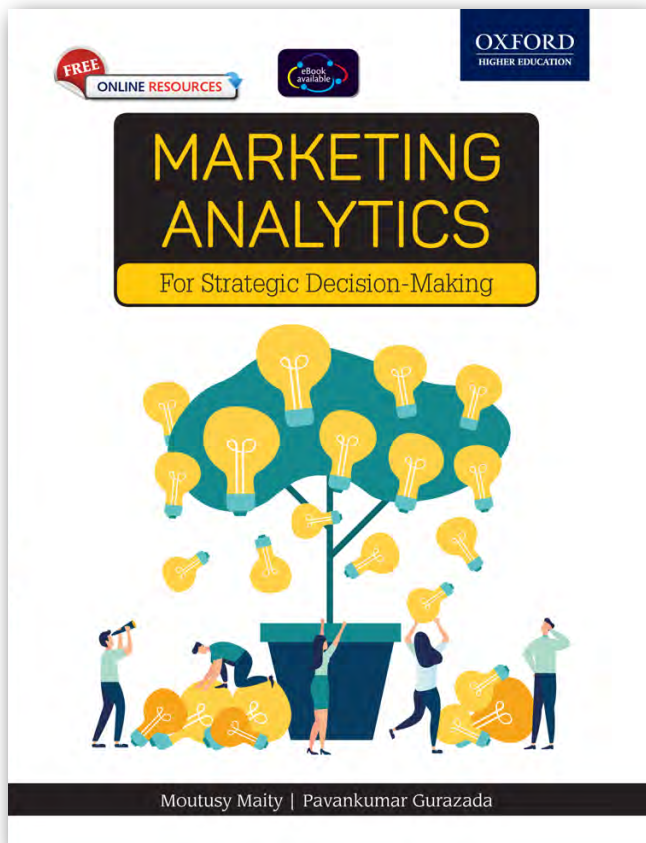
- Balanced coverage of the subject with simple language and logical flow of topics
- Emphasis on the Indian context through discussions on issues such as family culture in India and changing role of Indian women, supported with a rich mix of examples of Indian brands such as ITC, Ghari detergent, and Amul
- *Marketing Theory* and *Marketing Practice* sections consolidate the conceptual foundation and application of the subject
- Detailed and thought-provoking case studies on Honda, Philips AirFryer, Titan, Reva e2o, among others

Harsh V. Verma is Associate Professor of Marketing at Faculty of Management Studies, University of Delhi, with over 23 years of teaching experience.

Ekta Duggal is Assistant Professor of Commerce at Motilal Nehru College, University of Delhi. She has been a visiting faculty at Delhi School of Economics.

eISBN: 9780190992286





Print ISBN: 9780190130862

MARKETING ANALYTICS

For Strategic Decision-Making

With a change in the consumer's buying behaviour, there is a need for marketers to understand and use technology-enhanced data collection and analysis methods. **Marketing Analytics** has been written from a perspective to provide a complete coverage of the analytical concepts that are pertinent and important for a marketer through illustrations that make use of appropriate data sets and apply software such as R, SPSS and Excel.

Designed primarily for the students of MBA specializing in Marketing, the book will also be useful for marketing professionals trying to improve their understanding of marketing analytics. Spread over 17 chapters, the book is divided into four sections.

Section I, The Need for Marketing Analytics—Provides a holistic step-by-step roadmap for undertaking marketing analytics. Real-world examples of machine learning in marketing analytics are presented. A machine learning approach is adopted throughout the book.

Section II, Understanding the Consumer and Customer: Using Structured Data—Presents analytic techniques for analyzing structured data. This section discusses analytical techniques including cluster analysis, multi-dimensional scaling, conjoint analysis, regression techniques, ANOVA, survival analysis, RFM technique, and customer lifetime value.

Section III, Understanding the Consumer and Customer: Using Unstructured Data—Provides a variety of analytics techniques to analyse unstructured data. This section discusses data obtained and analyzed from social networks and social networking websites, and presents analytic techniques including agent-based models, social network analysis, and text analytics.

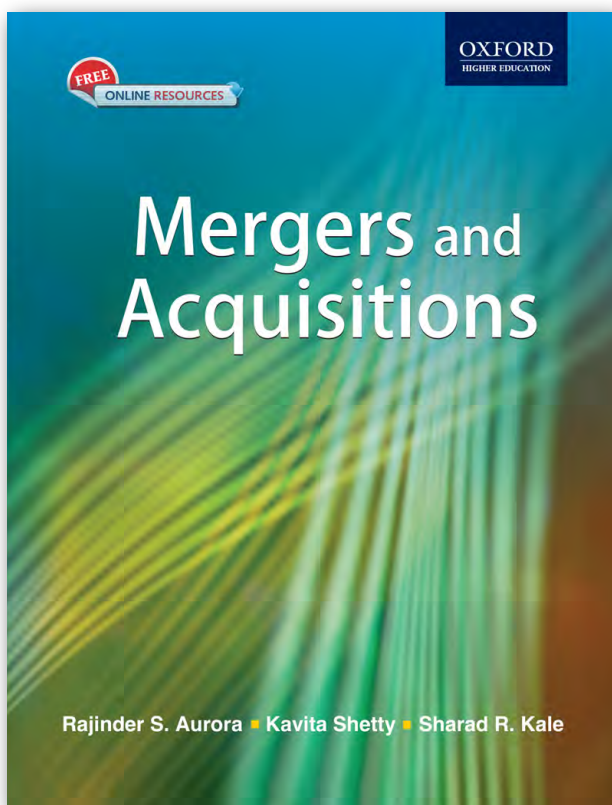
Section IV, Putting it All Together—Concludes by discussing the application of marketing analytics in the context of the 5 Ps (Product, Place, Price, Promotion, Packaging) and the 4 Cs (Customer Value, Convenience, Cost, Communication).

Key Features

- Provides comprehensive coverage of marketing analytics and its applications in the real world
- Includes Data sets and R Program codes in all chapters to be accessed through QR codes
- Presents all exercises demonstrating analytical concepts in at least two of the following analytics software: R programming language, SPSS or Excel
- Includes many examples for students to practise and learn the basics of marketing analytics

Moutusy Maity is Professor, Marketing Management, Indian Institute of Management Lucknow.
Pavankumar Gurazada is Faculty (Business and AI), Great Learning, Bengaluru.

eISBN: 9789391050481



Print ISBN: 9780198064510

Mergers and Acquisitions

Mergers and Acquisitions is a comprehensive textbook designed for students of postgraduate management programmes. It explores the core concepts of mergers and acquisitions (M&As) and the challenges encountered in implementing them.

Beginning with the conceptual framework of corporate restructuring, the book goes on to discuss takeovers and M&As, the concept and process of due diligence, and legal issues in M&As. The key issues relating to valuation and accounting are then explained. The book also discusses post-merger issues, the human aspect of M&As, and cross-border acquisitions. It concludes by exploring alternatives to M&As that include corporate divestments and strategic alliances.

Students will find this book useful for its coverage of the key concepts of M&As, explained through solved numerical problems, examples, case studies, and exhibits.

Key Features

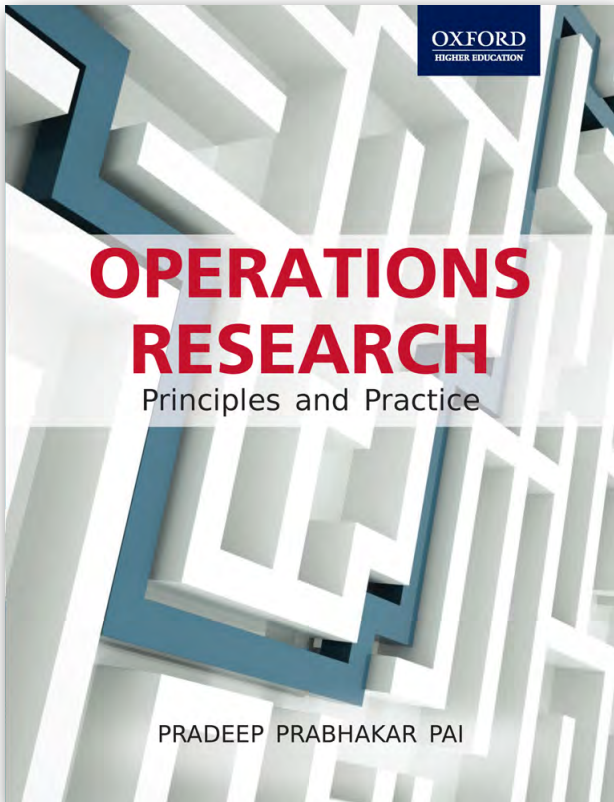
- Discusses numerous types of takeover strategies and over 30 takeover defences
- Includes solved examples for better understanding of accounting issues
- Provides comprehensive case studies, including those from an Indian perspective, at the end of the book that cover all major issues discussed

Rajinder S. Aurora is Senior Lead—Academics at Future Innoversity, Mumbai and a management consultant, visiting faculty, and corporate trainer. Over the past 25 years, he has headed prominent business schools in Mumbai. Dr Aurora has been conferred the Order of Merit by the Indian Council of Management Executives for excellence in management education and the Shiksha Bharti Puraskar by the All India Achievers Foundation.

Kavita Shetty is a management consultant. She was Associate Dean—Academics with Centum U, Mumbai and has also worked with other business schools in Mumbai. She has 14 years of teaching experience at the undergraduate and postgraduate levels in economics and management.

Sharad R. Kale is a management consultant and Director, CKP Co-operative Bank Ltd, Mumbai. He is a chartered management accountant (UK) and a member of the Institute of Cost and Works Accountants of India. He has taught finance in several business schools in Mumbai.

eISBN: 9780190993313



Print ISBN: 9780198075479

OPERATIONS RESEARCH

Operations Research: Principles and Practice is a comprehensive textbook specially designed to meet the needs of business management students. It explains the concepts and managerial applications of operations research lucidly, with the help of graphs, tables, and numerous solved examples.

Comprising 18 chapters, the book provides an in-depth coverage of linear programming problem and its various applications/extensions such as assignment problems, transportation problems, and integer and goal programming. Also, various theories and processes related to inventory management methods, sequencing, and queuing theory have been covered in detail. The book covers important topics such as network analysis tools, Markov chains, and decision theory. It concludes with chapters on investment analysis and non-linear programming. A comprehensive chapter on game theory applications adds further value to the book.

This book would also be useful for students pursuing postgraduate courses in operations research and commerce. Besides, it offers valuable insights into the subject for practitioners to optimize in business situations.

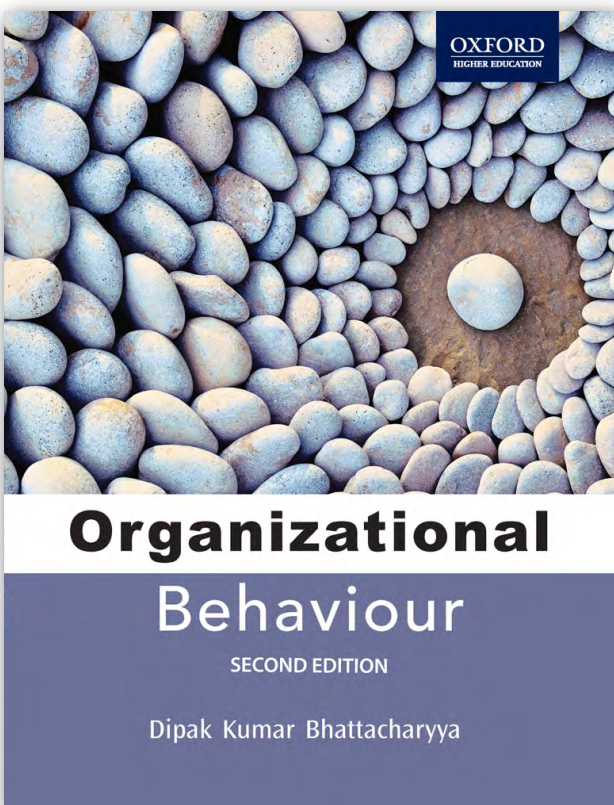
Key Features

- Discusses topics such as sensitivity analysis for a minimization problem, Activity on Node (AON) method of network analysis for a deterministic project, theory and method of oddments to solve game theory problems, transshipment problems, and an introduction to non-linear programming problems
- Equips students with the skills required for making rational business decisions using operations research techniques/models
- Explains the rationale behind every step in manual iteration method
- Provides a special section on avoiding common mistakes while solving operations research problems in each chapter
- Includes application of software (Microsoft Excel Solver) in relevant chapters

Pradeep Prabhakar Pai is currently Associate Professor, School of Business Management, Narsee Monjee Institute of Management Studies (NMIMS), Mumbai. With degrees in engineering and management, he has over two decades of industrial and consulting experience in marketing and operations functions for various companies.

Prof. Pai has also been teaching operations research and related subjects as a visiting/adjunct faculty in various business schools in Mumbai and Ahmedabad.

eISBN: 9780199084272



Print ISBN: 9780199451166

Organizational Behaviour

SECOND EDITION

The second edition of *Organizational Behaviour* is a comprehensive textbook designed to cater to the syllabi requirements of management students. The text provides extensive coverage of all the basic principles of organizational behaviour. It covers advanced topics such as organizational strategies, globalization and organizational behaviour, knowledge management, organizational behaviour research, and total quality management (TQM) and organizational behaviour in detail.

The focus of this particular edition is to provide a better balance between the theory of organizational behaviour and its applications. Besides covering the regular topics, the book explores ergonomics, human engineering, transactional analysis, international organizational behaviour, stakeholders and ethical organizations, mergers and acquisitions and their impact on corporate culture, Indian companies and knowledge management, some uncommon data collection methods for organizational behaviour research, and the effect of organizational behaviour on innovation and creativity in detail.

Key Features

- Explores new issues in organizational behaviour such as the use and abuse of emotional intelligence at workplace, value analysis, globalization, TQM, six sigma practices, strategic knowledge management in Indian organizations, and catalysts for knowledge management practices in organizations
- Provides examples and exhibits for explaining the key applications of organizational behaviour
- Includes case studies of organizations pertaining to various sectors to facilitate better understanding of concepts

New to The Second Edition

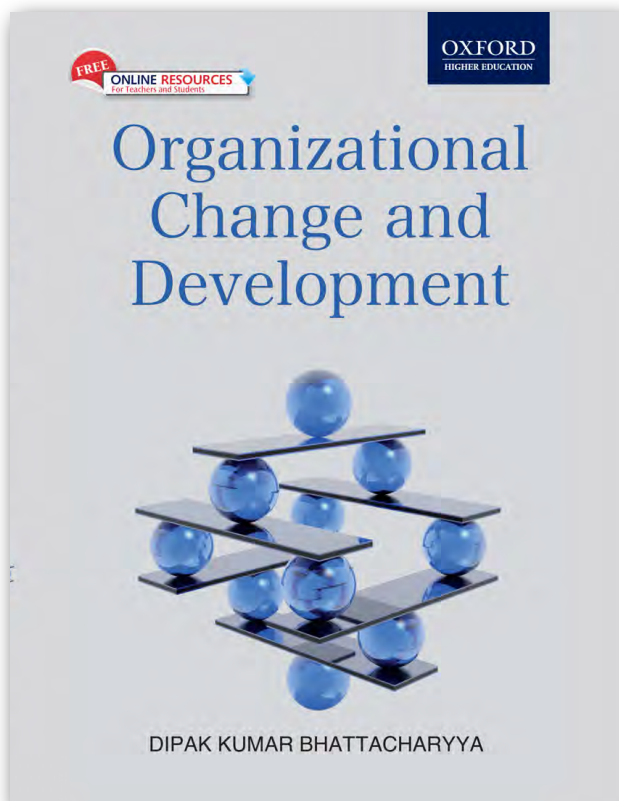
- A new chapter on introduction to organizational change
- New sections such as attitude-behaviour relationships, emotional labour, affective events theory, factors of organizational politics, dependence-power relationship, organizational politics and defensive behaviour, and the impact of globalization on organizational behaviour
- A new feature called Practitioner Speak to share experiences and ideas of management gurus and industry leaders
- New exhibits in all chapters to illustrate concepts by providing real-life examples
- Sidebars to facilitate easier recapitulation of key concepts

Dipak Kumar Bhattacharyya is currently Professor at the Xavier Institute of Management, Bhubaneswar (XIMB). He has also taught at XLRI, Jamshedpur. With more than 15 years of professional and over 20 years of teaching experience, he is actively involved in research, training, and consulting activities. Dr Bhattacharyya has authored several books on human resources and management including Compensation Management (OUP 2009), Organizational Change and Development (OUP 2011), and Human Resource Research Methods (OUP 2007). He has also published over 100 articles and papers in various journals of national and international repute.

eISBN: 9780190991005



TOC list



Print ISBN: 9780198066460

Organizational Change and Development

Organizational Change and Development is aimed at management students specializing in human resources (HR) and strategy. Providing a strong conceptual foundation of the subject, the book takes the readers through all the processes and stages of change, as seen and experienced worldwide. It also explains the strategies and the related implementation aspects of various concepts.

It provides a detailed coverage of the economic, psychological, political, and sociological perspectives of organizational development (OD). In addition, it provides guidelines for change management. Divided into five parts, the first part of the book gives an overview of organizational processes and organizational change. The second part discusses in detail the management of organizational change, while the third focuses on the nature of OD. The last two parts discuss OD interventions and strategies and contemporary issues in OD.

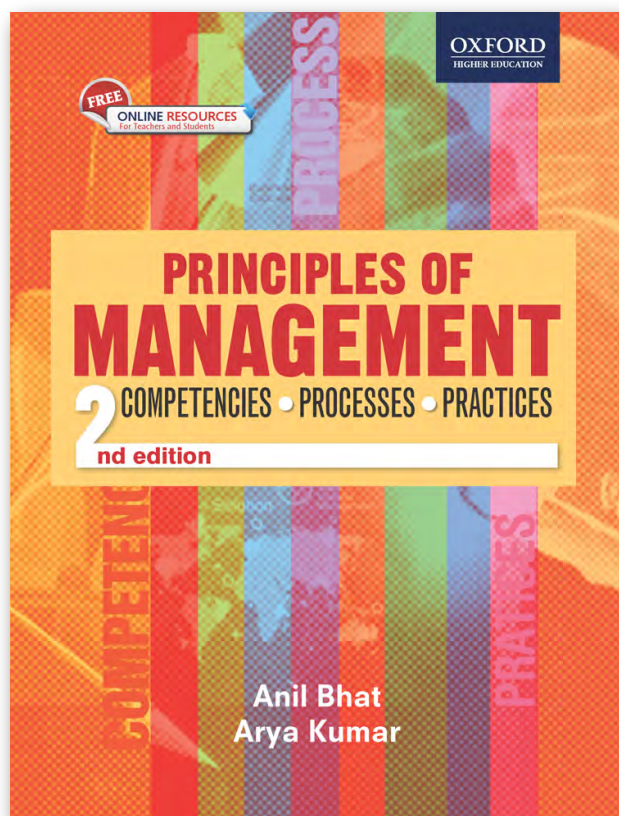
The book includes separate chapters covering contemporary issues such as diversity management and knowledge management and provides inputs for further research. With its wide coverage, the book will be equally useful to industry practitioners and change management consultants besides students.

Key Features

- Includes exhibits and examples to explain OD and change management practices
- Discusses OD experiences in several Indian and international organizations such as Wal-Mart, Lehman Brothers, Godrej, and Indian Ordnance Factories
- Provides appendices on guidelines for organizational change, sample of a dashboard, and organizational health survey

Dipak Kumar Bhattacharyya is presently Professor (OB/HRM), Xavier Institute of Management, Bhubaneswar. Prior to this, he was the Director at the Camellia School of Business Management, Kolkata, the Dean of the Indian Institute of Social Welfare and Business Management (IISWBM), Kolkata, and the Director of the Institute of Engineering & Management (IEM), Kolkata, and AIMA-CME, New Delhi. He was also a visiting professor at XLRI Jamshedpur. With more than fifteen years of professional experience and over twenty years of teaching experience, he is actively involved in research, training, and consulting activities. Dr Bhattacharyya has authored several books on HR and management along with over 100 articles and papers published in various journals of national and international repute.

eISBN: 9780190990992



Print ISBN: 9780199457588

PRINCIPLES OF MANAGEMENT

2nd edition

The second edition of **Principles of Management: Competencies, Processes, and Practices** is a comprehensive textbook specially designed to meet the needs of MBA and diploma students of management courses and working professionals.

The book discusses managerial functions, such as planning, organizing, leading, and controlling as well as organizational functions, such as finance, marketing, operations management, management information systems, strategy, and human resources in detail.

Key Features

- Describes several managerial and economic analytical tools such as strengths, weaknesses, opportunities, and threats (SWOT) analysis, financial ratio analysis, forecasting methods, and more
- Provides chapter-end exercises to facilitate experiential learning, information gathering, and analysis
- Includes detailed sections on managerial competencies with separate chapters on motivation, team effectiveness, communication, conflict management, leadership, decision-making, emotional intelligence, stress management, and creativity and entrepreneurship

New to This Edition

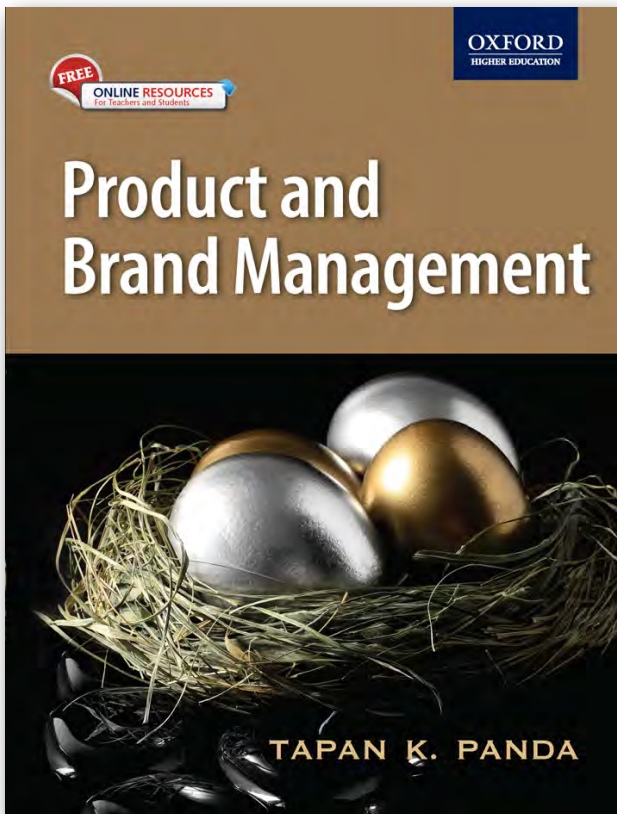
Five new chapters on

- Management Control Systems
- Security Analysis and Portfolio Management
- Organizational Change and Development
- Online Social Media
- Project Management

Anil Bhat (Fellow, IIM Bangalore) is Professor and Head, Department of Management, BITS, Pilani. He has 25 years of distinguished academic, administrative, and managerial experience.

Arya Kumar (PhD, BITS Pilani) is Dean – Alumni Relations and Professor – Economics and Finance at BITS Pilani. He has more than four decades of diversified experience in educational institutions, research organizations, banks, and other financial institutions.

eISBN: 9780190993221



Print ISBN: 9780199460496

Product and Brand Management

Product and Brand Management is a comprehensive textbook designed to meet the needs of MBA students specializing in marketing. It offers in-depth coverage of various elements, valuation techniques, and emerging applications for managing a product as well as a brand.

The book has been divided into seven parts. Part I provides a detailed discussion on handling products, product life cycle, and developing new products. Parts II and III explain the various brand choice models, brand identity, and brand image in detail. Part IV describes the marketing and accounting concerns of brand valuation, and the methods of brand tracking and monitoring. Parts V, VI, and VII elucidate the brand revitalization techniques, methods of building a successful brand in the Indian market, and strategies used to keep brands alive across geographical borders.

Readers would find this book useful for the detailed coverage of concepts supported with numerous real-life examples, exhibits, and case studies.

Key Features

- Contains many examples and exhibits of brands such as Hero Motors, Vodafone, Alibaba, SnapDeal, and LG to support the detailed explanation of various models and elements of brand management.
- Provides in-depth discussion on co-branding, private labels, and digital branding
- Discusses valuation of brands from the perspective of the cost of the brand, market price, and brand performance audit
- Provides numerous application questions and project assignments to enhance and hone the marketing skills of the readers

Advance Praise for the Book

Dr Panda's book provides timely and valuable knowledge about product and brand management in Indian and Asian context. With the growing importance of emerging markets, this book will be appreciated by both academics and practitioners.

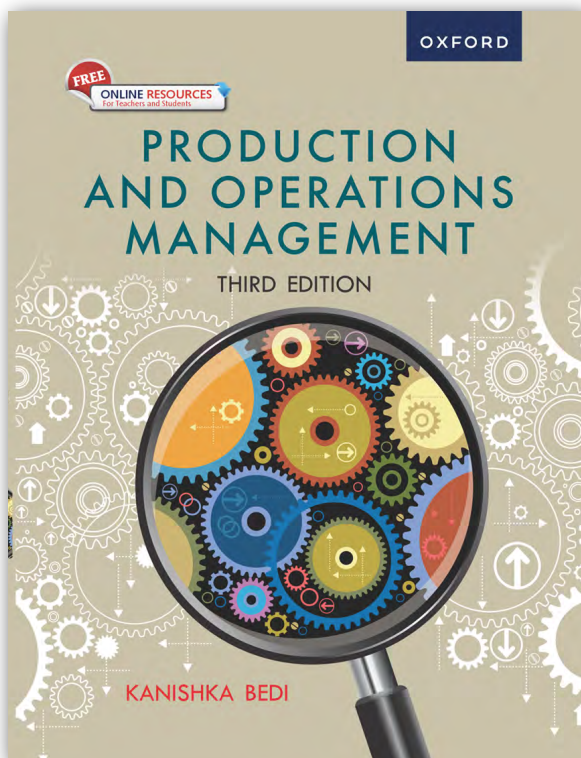
—Soumitra Dutta, Anne and Elmer Lindseth Dean and Professor of Management, Samuel Curtis Johnson Graduate School of Management, Cornell University, USA

Dr Panda's book demystifies some of the fundamental principles in marketing and branding in Indian and Asian context. The comprehensive coverage of cases will help readers understand and apply concepts in emerging market context.

—Prof. Anand Anandalingam, Dean and Professor of Management Science, Imperial College London Business School, London.

Tapan K. Panda is Chief Academic Officer at Ampersand Group, Mumbai. Prior to this, he was Dean at OP Jindal Global University and Professor & Dean at BML Munjal University. Dr Panda is the author of *Sales and Distribution Management*, 2e published by Oxford University Press, India.

eISBN: 9780190992279



Print ISBN: 9780198072096

PRODUCTION AND OPERATIONS MANAGEMENT THIRD EDITION

Production and Operations Management is a comprehensive textbook specially designed to meet the needs of management students. The text uses an application-based approach to explain the various concepts using extensive industry examples, cases, and exercises. This third edition of the book has been revised to include several new topics as also a chapter on new product development.

Beginning with an introduction to the principles of the subject, the book goes on to discuss operations strategies, new product development, facility location planning, and project management. It provides in-depth coverage of topics such as aggregate planning, work design, demand forecasting, and operations scheduling.

Key Features

- A unique blend of theory and practice, the text provides a step-by-step approach to the topics.
- Each chapter is exhaustive, with numerous solved and unsolved examples and exhibits.
- The chapters include several cases as well as chapter-end problems with critical thinking elements, group discussions, and projects.

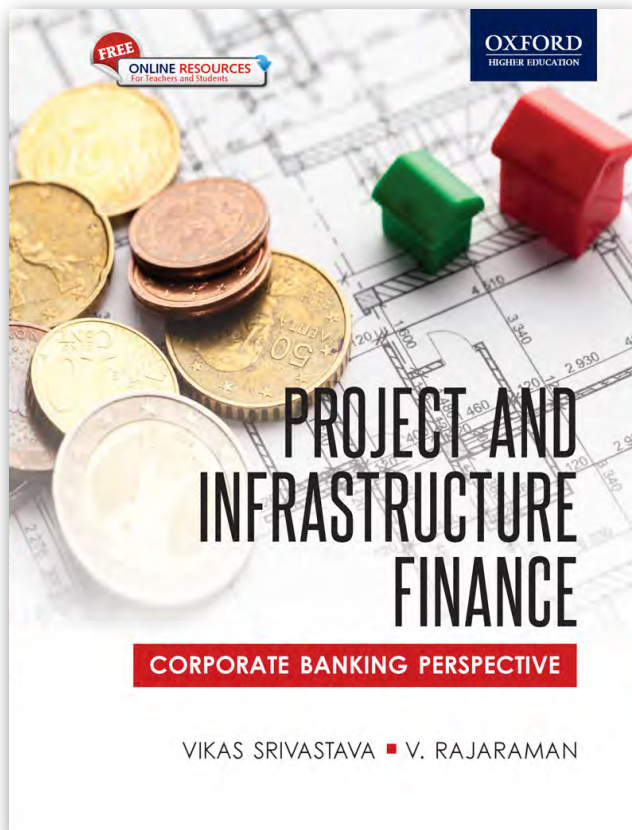
New to This Edition

- Chapter on new product development
- Sections on facility location decisions and network design in the supply chain, calculating labour and machine requirements, earned value management (EVM), managing demand uncertainty, vendor relationship management, and more
- Additional exhibits, case studies, and numerical problems
- Objective-type questions

Kanishka Bedi is Professor, School of Business & Quality Management, Hamdan Bin Mohammed Smart University, Dubai, UAE. He has more than two decades of teaching experience and is active in research, executive training, and consultancy.

eISBN: 9780190992293





Print ISBN: 9780199465002

PROJECT AND INFRASTRUCTURE FINANCE

Project and Infrastructure Finance is a detailed textbook designed for management students specializing in finance. It provides an in-depth discussion on the various elements and risks applicable to Indian markets and banks.

The book introduces project finance along with a detailed discussion on its rationale and scope. It explains global project finance investments, financing contracts and documentation, and how a company actually structures a project. Valuation of a project and its cash flows along with cash flow models and due diligence are also explained in detail.

The book further elucidates processes of preparing an appraisal note, and appraisal of a term and working capital loan. Insights on ways of managing project risks and credit risks in financial transactions are also provided. The book concludes with a discussion on applications of project finance in different sectors such as road, telecom, and power.

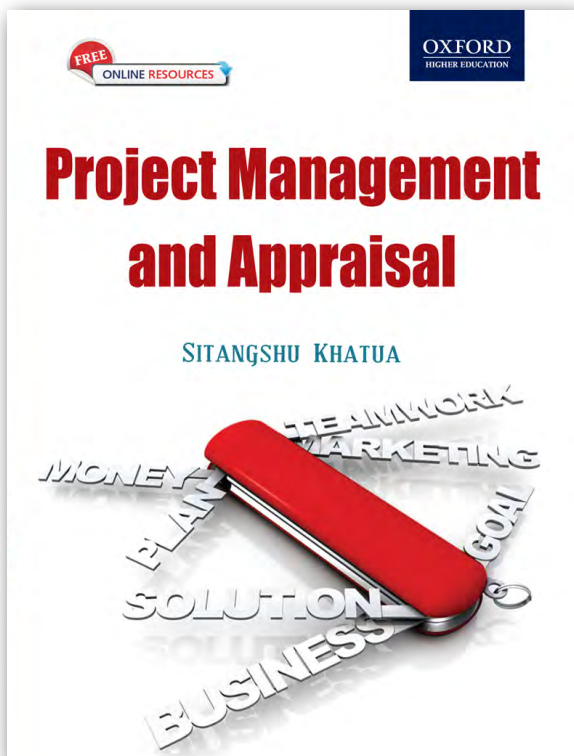
Key Features

- Discusses various components and complexities of project finance with numerous Indian examples and exhibits
- Includes concept checks that provide an insight into the applications of project finance
- Provides case studies with discussion questions based on them
- Includes RBI guidelines regarding debt restructuring, management of distress assets, and other related aspects

Vikas Srivastava is Associate Professor at IIM Lucknow. He is the Chair of the Post Graduate Program and in the past, was associated as faculty with IIM Ranchi and National Institute of Bank Management, Pune. He has given consulting support to several organizations including Axis Bank where he was an Advisor, Project Finance and Corporate Banking.

V. Rajaraman is currently serving as an independent director on the board of Axis Trustee Services Ltd (Axis Bank group). He retired as General Manager from Bank of India in December 2009.

eISBN: 9780199094578



Print ISBN: 9780198066903

Project Management and Appraisal

Project Management and Appraisal is a comprehensive textbook specially designed to meet the requirements of postgraduate management students specializing in finance and operations. It aims to familiarize the readers with the core concepts of project management including its planning, execution, control, and appraisal.

Written from a managerial perspective, the book is divided into four parts. Part I, Introduction to Project Management, gives an overview of project management, along with discussions on the phases, network diagrams, project scheduling, and the Microsoft Project software. Part II, Project Appraisal, elucidates the various appraisal methods in project scanning and selection, including technical, social, and financial appraisal. It also discusses the risk analysis models and includes a chapter on project appraisal in the international context. Part III, Project Planning, Execution, and Control, covers project life-cycle planning, and the reasons for cost and time overrun. This part also explores the execution, including budgeting and scheduling, and the importance of control and audit of a project. Part IV, Project Management—The Future, covers e-projects and discusses the prospects of project management.

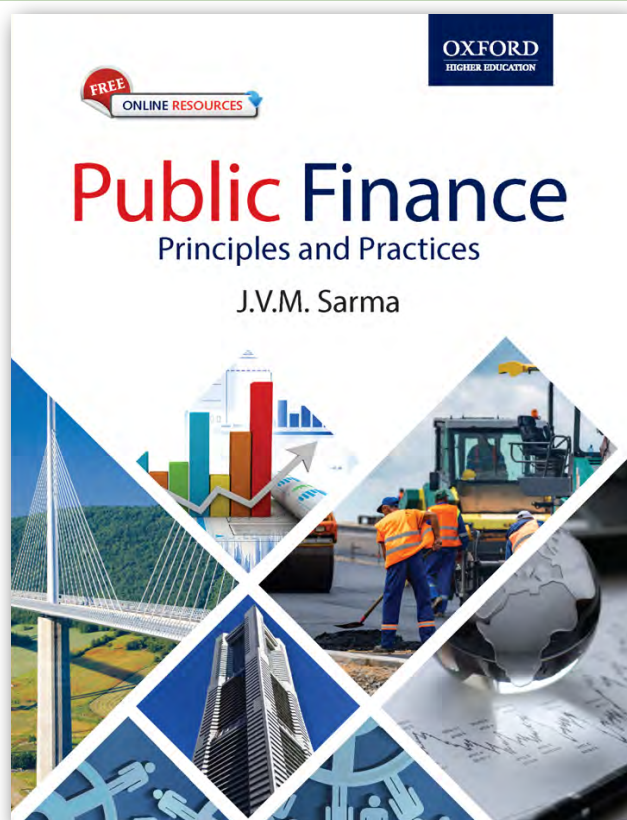
Owing to its application-based approach, the book will be a valuable guide for students and a useful reference for professionals.

Key Features

- Explains the concept of financial appraisal in project scanning and selection including the fundamentals of capital budgeting decisions comprehensively
- Includes recent examples such as the Tata Nano, Delhi Metro, and Nayachar chemical hub projects
- Contains appendices on the regulatory framework in project appraisal, tables on the several discounted and compounded factors for various rates and time periods, and a detailed project report
- Provides critical thinking exercises and project assignments to enhance and hone the management skills of the readers

Sitangshu Khatua, Ph D from XLRI Jamshedpur, is Associate Professor of finance at Management Education Centre (MEC) of the Heritage Institute of Technology, Kolkata. Earlier, Associate Dean at Jyotirmoy School of Business, Kolkata, Dr Khatua has over 15 years of experience working both in the industry as well as in academics. He has been conducting corporate training and management development programmes for NTPC, IFB, IOC, RITES, and Ultratech since 2000. He was also a part of the project on small and medium enterprises financing in India under National Productivity Council and Recruitment activity under Jharkhand Educational Council. He has presented several papers in national and international conferences and published articles in peer review journals.

eISBN: 9780190992439



Print ISBN: 9780199479610

Public Finance

Principles and Practices

The textbook of *Public Finance: Principles and Practices*, basically intended for students of MA and research scholars, specializing in public finance, aims to make the students understand the institutional and practical aspects of the subject. It is designed to provide the necessary tools and conceptual framework to understand the fiscal situations around the world.

The book is divided into 9 modules comprising 27 chapters, and includes most of the theoretical as well as practical aspects. The modules are The Basics, Public Expenditure, Public Revenue, Taxation of Income and Wealth, Public Revenue—Indirect Taxes, Public Revenue—Non-taxes, Role of Fiscal Policy and Public Debt, Federal Fiscal Issues, and Macro-fiscal Management. The book covers several contemporary public financial issues relating to taxation, public debt, FRBM, GST, and international taxation.

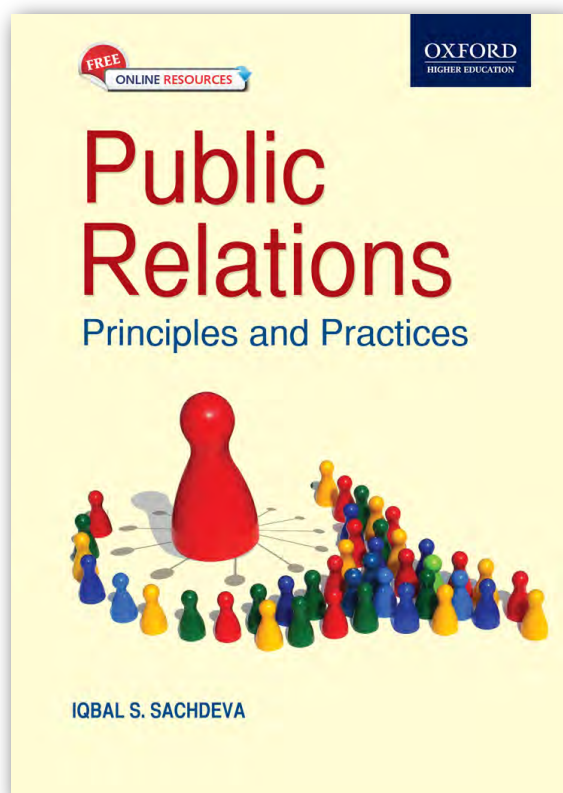
With its lucid language, interspersed with several real-life examples and figures, the book will be equally useful for students and policy makers and those conducting policy training programmes.

Key Features

- Provides basic understanding of the conceptual and theoretical issues in public finance/public economics
- Helps students in the use of analytical methods used in public economics, and the role of the state in principle and practice around the world
- Provides a comprehensive foundation to the principles underlying tax and non-tax design, the provision of goods in the public sector, and tax enforcement
- Enables students to understand the practical problems involved in implementing these principles
- Includes an entire chapter on GST under indirect taxation

J.V.M. Sarma was formerly Professor of Public Finance, School of Economics, University of Hyderabad.

eISBN: 9780199094523



Print ISBN: 9780195699180

Public Relations

Principles and Practices

Public Relations: Principles and Practices is a comprehensive textbook designed for students of mass communication, corporate communication, and public relations (PR). The core concepts of PR have been explained through numerous examples, exhibits, tables, and illustrations.

Divided into five parts, the first part of the book on *Fundamentals and Emergence* gives an overview of PR and acquaints the readers with the emergence of the field. The second part on *Process and Practice* discusses in detail the PR window for developing a PR programme, which includes scanning the environment, creating a communication plan/strategy, implementing the plan, and measuring its impact. The third part on *Skills* focuses on key communication and negotiation skills, which are essential for PR professionals. The fourth part on *Applications* goes on to discuss PR relations with several publics such as customers, dealers, vendors, employees, investors, and media. The final part on *Support Service* elaborates on the role and structure of PR agencies.

Students of media studies and aspiring PR professionals will find this book highly useful for its in-depth coverage of the key PR concepts. The book will also serve as a handy tool for practising professionals.

Key Features

- Uses the four-step public relations window to facilitate the readers' understanding of developing PR and communication programmes
- Includes a section on communication and negotiation skills, which are essential for PR professionals
- Discusses in detail the applications of public relations in various spheres such as government PR, lobbying, event management, and crisis management
- Includes chapters on media relations, corporate social responsibility, corporate identity, corporate image, and PR ethics

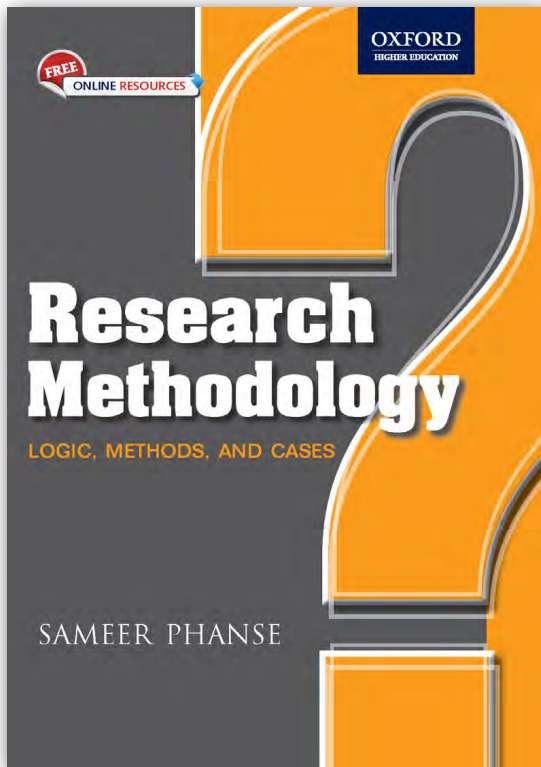
Iqbal S. Sachdeva, former Secretary, Public Relations Society of India, is a communication and media specialist and has worked in various fields such as communications, public relations, advertising, sales training, and marketing. He has three decades of industry experience with Goodyear and is presently a guest faculty at various business and media institutes.

He writes for newspapers such as *The Observer*, *The Financial Express*, *Hindustan Times*, *The Tribune*, etc. as a freelance journalist. He is a recipient of the coveted E.J. Thomas Goodyear Spirit Award.

eISBN: 9780199085101



TOC list



Research Methodology

LOGIC, METHODS, AND CASES

Research Methodology—Logic, Methods, and Cases shares valuable, rarely accessible methodological insights, capable of turning seekers into mature researchers.

Besides postgraduate management students, others such as research/doctoral scholars, academicians, practising researchers, consultants, and corporate executives connected to research will also find this book useful as it illustrates the philosophical underpinnings of research procedures in detail. The book also shares important methodological insights.

The book makes research intuitive, effective, and enjoyable by divulging philosophical and logical ideas that are key to comprehension of others' research and success in one's own research.

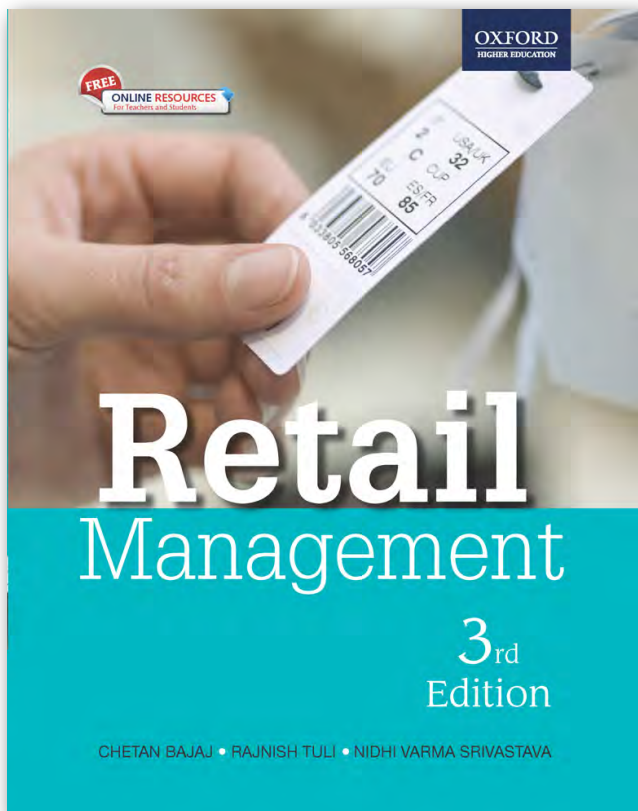
Key Features

- Comprehension versus Memorization: Knowledge through understanding rather than rote learning
- Methodological Legitimacy: 'Why', not just 'How' of research
- Multiple Methods Discussed: Empirical, Statistical, and Logical
- Cutting Edge: Statistical Computing Resources discussed along with their methodological implications in research including data analytics

Sameer S. Phanse, PhD, is a marketing and political consultant with nearly 25 years of consulting experience in research and strategy. He is a visiting faculty for research, engaging postgraduate students, doctoral scholars, and faculty.

Print ISBN: 9780199453788

eISBN: 9780199098866



Retail Management

3rd
Edition

The third edition of **Retail Management** is specially designed to meet the requirements of the postgraduate students of management. The book provides a lucid explanation of essential concepts related to retail management with the help of Indian and global examples, exhibits, and case studies. The text integrates theory with corporate examples and provides rich insights into the dynamics of the retail sector.

Key Features

- Contains classroom-tested cases from global as well as Indian retail chains and stores
- Includes examples and exhibits in key areas of retail management
- Provides concept-review questions, and classroom and field projects such as group discussions and analytical reporting at the end of each chapter

New to the Third Edition

- Includes a new chapter on e-commerce
- Contains extended coverage on use of technology in retail, role of private labels, and coverage of legal and political aspects of the retail business
- Presents revised and updated content throughout
- Provides new case studies, exhibits, and photographs

Praise for the Earlier Editions

'The text provides a very comprehensive and in-depth coverage of all the issues a retail professional would find useful. Retailing concepts in India's emerging economy and unique socio-cultural environment require a specific treatment and coverage, and the book is a wonderful exposition of the same—a must read for anyone interested in a retailing career.'

—Amit Mookerjee, Professor, IIM Lucknow, Noida campus

'This retail text provides a comprehensive coverage of retail issues in the Indian context, with interesting insights into unorganized retail.'

—Pradeep Kashyap, Founder & CEO, MART

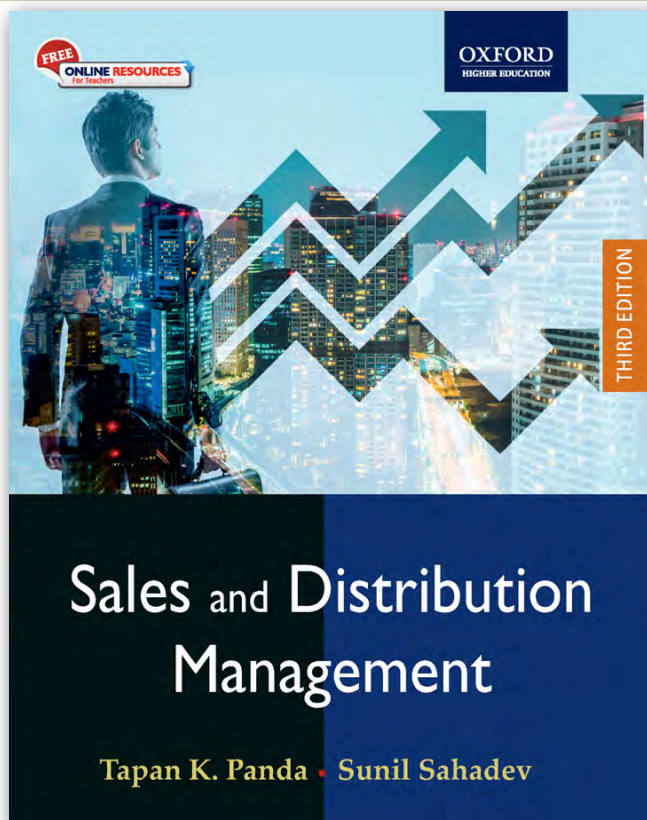
Chetan Bajaj is presently Director at International School of Business & Media, Bengaluru.

Rajnish Tuli is presently Lead, Marketing Science, MediaCorp, Singapore.

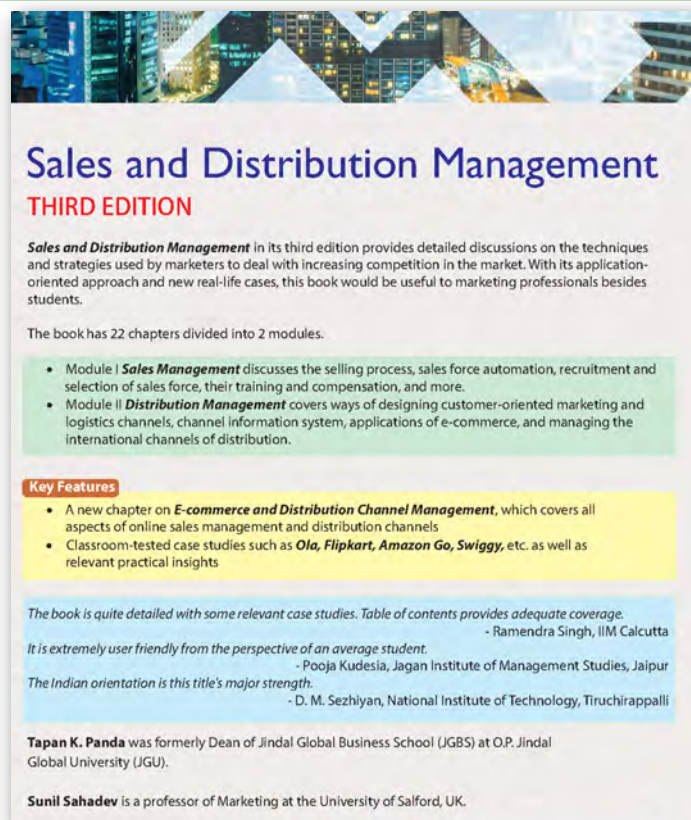
Nidhi Varma Srivastava is presently the Marketing Science Director at Millward Brown, India.

Print ISBN: 9780199467440

eISBN: 9780190992422



Print ISBN: 9780199499045



eISBN: 9780190992651



Print ISBN: 9780198072027

Sales Management

Sales Management is a comprehensive textbook specially designed to meet the requirements of management students specializing in marketing. It explains the theoretical and practical aspects of sales management through numerous industry examples, case studies, exhibits, and illustrations.

The book is divided into five parts. The first part, Personal Selling, begins with an overview of the key concepts of personal selling with various approaches and strategies, and goes on to discuss the personal selling process in detail. The second part, Organization of Sales Force Functions, focuses on managing the sales force and elucidates on sales organization and territory. The third part, Managing the Sales Team, defines the roles and responsibilities of salespeople and includes chapters devoted to sales force recruitment, selection, training, motivation, compensation, and performance. The fourth part, Financial Aspects of Sales, examines the need of sales budgeting, forecasting, and cost analysis. The concluding part, Strategy and Modern Approaches, discusses the various sales strategies along with the effects of globalization and the modern approaches to effective selling.

Owing to its comprehensive coverage, the book will be useful to professionals besides students.

Key Features

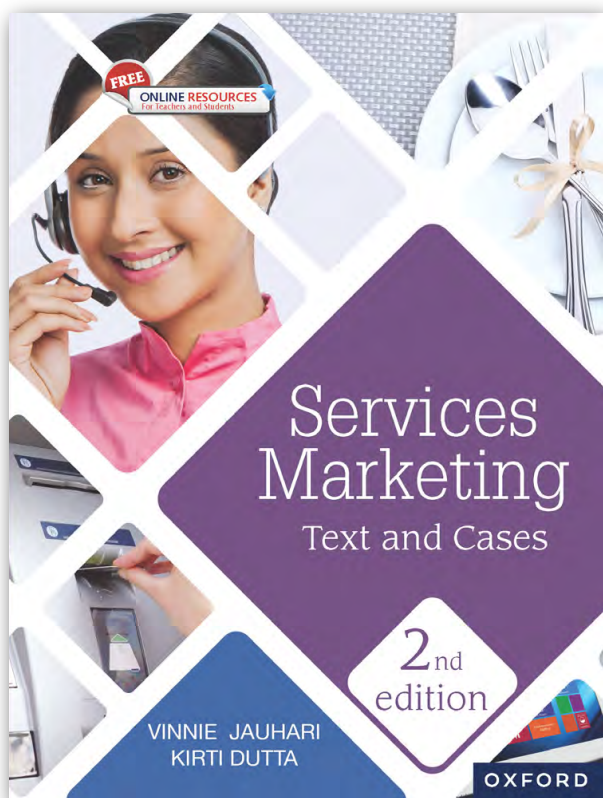
- Provides in-depth coverage and analysis of the approaches to personal selling and the strategies for their implementation
- Explains the key concepts with the help of Indian examples taken from real-life situations
- Discusses in detail the selection process of a sales management team and its relation to other departments
- Provides guidelines for effective sales performance

Pradip Kumar Mallik, currently Professor at the Department of Business Administration, The University of Burdwan, has more than 20 years of experience in academia. Formerly, he was the head of the Department of Business Administration, The University of Burdwan. He has contributed several research articles in many journals of repute.

eISBN: 9780199084203



TOC list



Services Marketing SECOND EDITION

The second edition of *Services Marketing* has been specially designed to meet the requirements of postgraduate students of management. Essential concepts related to services marketing are explained lucidly with the help of Indian and global examples, exhibits, and case studies. The book integrates theory with corporate examples and provides rich insights into the dynamics of the services sector. It also includes Internet-based exercises which will help the students apply theory to business situations.

Key Features

- Integrates theory with corporate examples and provides rich insights into the dynamics of the services sector
- Discusses the practices of Indian and global companies
- Explains concepts through examples, exhibits, tables, and case studies
- Includes Internet-based exercises which will help students apply the concepts learnt to different business situations

New to This Edition

- New chapters on managing the services brand and managing demand and supply
- New sections on managing e-service and e-service quality, employee engagement in service industry, creating an empowered employee, and customer feedback and service management orientation
- Updated and revised content as well as new case studies
- Links to important research papers that will introduce students to influential academic contributions in this area

Praise for the First Edition

'The text is very comprehensive.'

—Dr Mary Cherian, KCT School of Business, Coimbatore

'Indian cases and exhibits are an excellent feature of this textbook.'

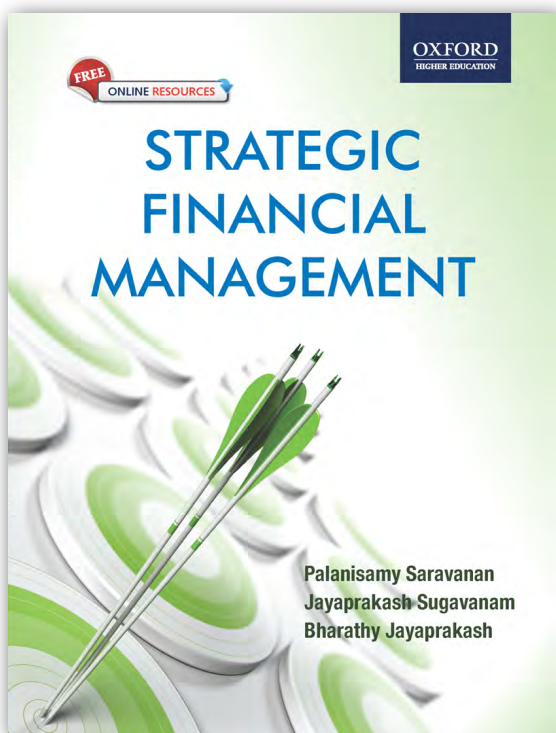
—Prof. Kingshuk Bhadury, Corporate trainer and management consultant

Vinnie Jauhari is Director, Education Advocacy, Microsoft Corporation India Pvt. Ltd, Gurugram.

Kirti Dutta is Professor (Marketing), Ansal University, Gurugram.

Print ISBN: 9780199456161

eISBN: 9780199094516



STRATEGIC FINANCIAL MANAGEMENT

Strategic Financial Management is a comprehensive textbook designed to meet the requirements of postgraduate management students specializing in finance. It aims to familiarize readers with the theoretical and practical aspects of managing finance in an organization to maximize its value through examples and exhibits.

The book begins with an introduction to strategic financial management, its scope, and how it is used by managers across organizations. Following this, it explores the importance of financial planning and analysis and also the role of a chief financial officer (CFO) in any organization. Further, the role of short-term funds and capital budgeting in strategic decision making is explored. The book also discusses corporate restructuring and its forms such as spin-offs, divestiture, joint ventures, and mergers and acquisitions. Financial engineering and usage of balanced score cards to solve financial problems have also been covered in the book.

With the inclusion of relevant case studies and critical thinking exercises, which provide application-oriented questions, the book will be useful for students and aspiring professionals.

KEY FEATURES

- Includes in-depth coverage of corporate valuation, capital budgeting, and financial engineering
- Discusses global factors that impact finances in organizations, such as inflation, currency rate changes, liquidity crunch, and increasing focus on enterprise risk management and approaches to handle them
- Explains factors leading to corporate restructuring and its forms in detail
- Provides solved and unsolved numerical problems to give an idea about application of techniques such as working capital, economic order quantity, and operating cash flows

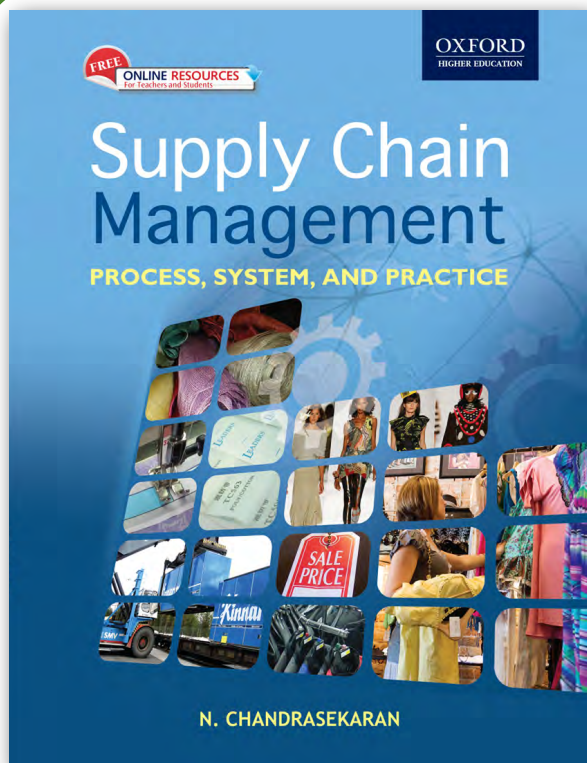
Palanisamy Saravanan is Professor at Indian Institute of Management Trichy.

Jayaprakash Sugavanam is co-founder and Vice President, NanoBI Data and Analytics Pvt. Ltd, Bengaluru, and has more than 20 years of work experience in the BFSI sector.

Bharathy Jayaprakash is a practising Chartered Accountant and a qualified Cost and Management Accountant based at Bengaluru.

Print ISBN: 9780198095187

eISBN: 9780190992347



Supply Chain Management

Supply Chain Management: Process, System, and Practice is a comprehensive textbook specially designed to meet the requirements of management students. It aims to familiarize the reader with the fundamentals of the supply chain process and the approaches to achieving excellence in this field.

Beginning with an overview of the key concepts, the book goes on to discuss the structure and decision hierarchy of supply chain management. It describes the supply chain flow and introduces the different aspects of the global supply chain. The subsequent chapters elucidate supply chain models and information technology applications in supply chain. The book concludes with a discussion on supply chain organizational issues and the approaches to assessment and excellence.

Readers will find this book valuable for its in-depth coverage, numerous examples, illustrations, flow charts, and data tables.

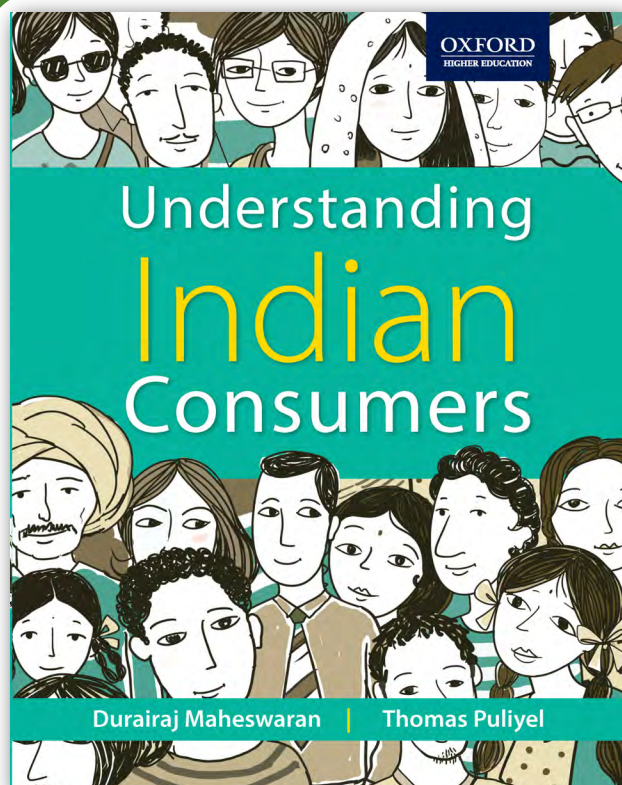
Key Features

- Discusses in detail the new business models and the applications of technology in supply chain management
- Provides several exhibits from leading Indian companies to facilitate better understanding
- Includes an entire chapter comprising case studies of renowned companies such as Redington (India) Limited, Cargomen Logistics (India) Private Limited, Clifton Export, and Sambandam Spinning Mills Limited
- Contains numerous project assignments, along with concept and critical thinking questions

N. Chandrasekaran, presently the Vice President (Corporate Affairs) at TAKE Solutions Limited, is also the Director at the Centre for Logistics and Supply Chain Management, Loyola Institute of Business Administration, Chennai. He has a Doctorate in Economics – Financial Management from the University of Madras, and has more than 25 years of corporate experience in areas relating to supply chain management, corporate planning, and strategic management. He has served as the Head of the CII Institute of Logistics, which is a National Centre of Excellence promoted by the Confederation of Indian Industry.

Print ISBN: 9780198063025

eISBN: 9780199084029



Understanding Indian Consumers

Marketing to India's diverse and rapidly changing consumers requires constant refreshment of knowledge and skills. To the keen MBA student specializing in marketing as well as its ardent practitioner, this book blends practical insights with theoretical frameworks.

Understanding Indian Consumers is a compilation of 20 articles from among some of the best minds in academia and business. So whether you are looking for insights and strategies to market to rural consumers, youth or women; or if the task is to address the luxury consumer; or study the emergent trends in advertising or digital communications; this is the book to pick up.

About the Editors

Durairaj Maheswaran is Professor of Marketing and International Business, Stern School of Business, New York University.

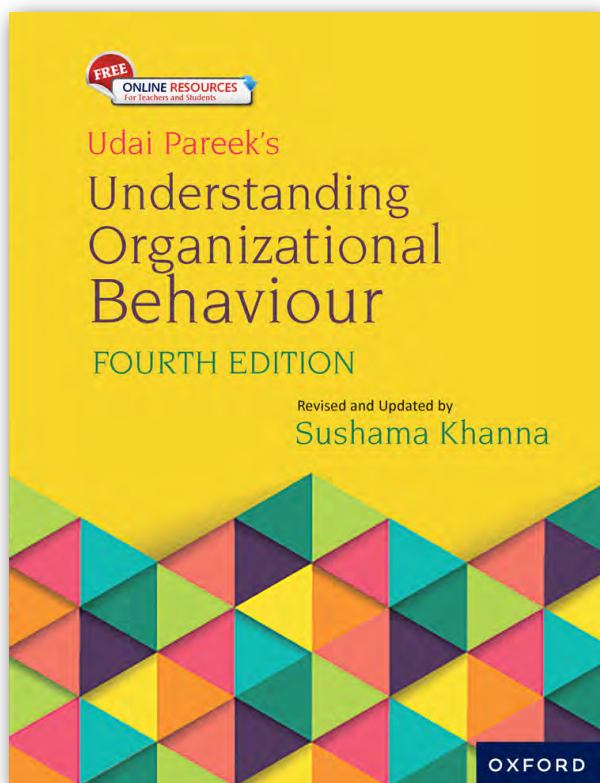
Thomas Puliyeel is Adjunct Professor, SP Jain Institute of Management and Research, Mumbai. He was formerly President of IMRB International.

Print ISBN: 9780199479627

eISBN: 9780199094455



TOC list



Print ISBN: 9780199454716

eISBN: 9780199094417

Understanding Organizational Behaviour FOURTH EDITION

The fourth edition of *Understanding Organizational Behaviour* is a comprehensive textbook tailored to meet the needs of postgraduate management students. It has been extensively revised to include new topics, examples, and case studies.

The book explores the core concepts and theories of organizational behaviour (OB) through managerial applications. It provides in-depth coverage of the issues and challenges faced by Indian companies in relation to different aspects: the individual, the role, the team, and the organization.

With its exhaustive treatment and practical application of theoretical concepts, this textbook is ideal for both students and professionals.

Key Features

- An engaging text that discusses the psychology of organizational behaviour as well as its practical implications
- Self-assessment exercises, such as personality profile inventory, and coercive and persuasive power bases scale, for personal and professional development
- Numerous examples, chapter-end concept review and critical thinking questions, as well as classroom and field projects

New to This Edition

- New chapters on dynamics of group behaviour and effective work teams
- New sections on OB model, organizational stress, roles played in a game, conflict process, methods of communication, job characteristics model, and forces responsible for organizational change
- Group exercises in all the chapters for users to understand the application of OB concepts
- New exhibits, illustrations, and case studies

Praise for the Previous Editions

'This book is a very good initiative as an Indian alternative to some of the standard international OB textbooks.'

— Prof. Unnikrishnan Nair, IIM Kozhikode

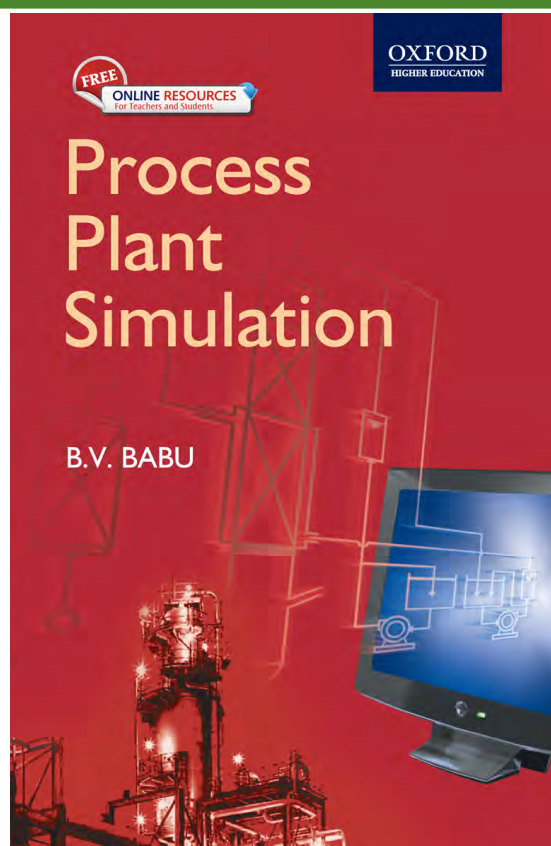
'This textbook is significant to the Indian context, and is useful in comprehensive understanding of essential OB concepts.'

— Vinita Sinha, SCMHRD, Pune

Udai Pareek, one of the pioneers in the field of OB and HRD in India, was former L&T Chair Professor at Indian Institute of Management Ahmedabad (IIMA).

Sushama Khanna is the Dean and Director (Outreach), UPHR-LABS at EMPI Business School, New Delhi.

CHEMICAL



Print ISBN: 9780195668056

eISBN: 9780199083893

Process Plant Simulation

This volume brings together all related topics on process plant simulation, a course that is offered in many institutions both in India and abroad for undergraduate as well as postgraduate students of chemical engineering.

The book adopts a generalized approach to modelling various engineering systems in such a way that the underlying principles can be applied to any new system in engineering, science, and other applied disciplines. It includes concepts on modelling, optimization, decomposition of networks, modular and equation-solving approaches, data regression, convergence promotion, etc.

A section is devoted to the introduction of non-traditional optimization techniques, which can serve as a guide to the methodology for various evolutionary optimization techniques (population-based search algorithms).

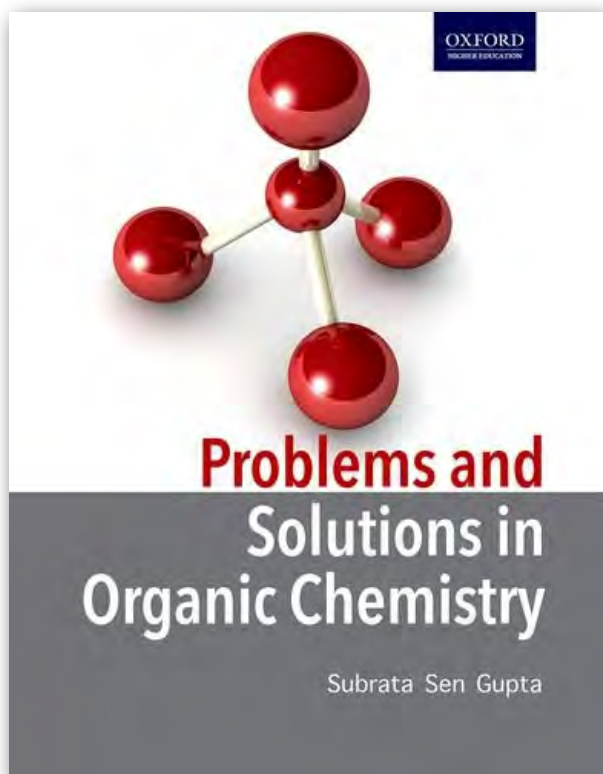
Students pursuing courses on process modelling and simulation as well as those involving optimization techniques and mathematical methods in chemical engineering and computer-aided design (CAD) will find the book useful. It would also serve as an up-to-date reference for researchers, professionals, and consultants.

KEY FEATURES

- Offers exhaustive coverage of all topics related to plant simulation
- Covers traditional as well as non-traditional optimization techniques
- Discusses case studies on specific-purpose and dynamic simulation
- Includes an overview of professional software packages used in plant simulation, such as HYSIS and FLUENT

B.V. Babu was formerly the Vice-chancellor of Graphic Era University, Dehradun and Galgotias University, Greater Noida. Earlier, he was the Dean of the Educational Hardware Division and Professor and Head of the Chemical Engineering and Engineering Technology Departments in Birla Institute of Technology and Science, Pilani. A PhD in heat transfer from the Indian Institute of Technology Bombay, he has over 18 years of experience in teaching, research, consultancy, and administration. He has taught both undergraduate and postgraduate courses in chemical engineering. He has designed a number of user-friendly software packages and has several research publications to his credit.

CHEMISTRY



Print ISBN: 9780199455461

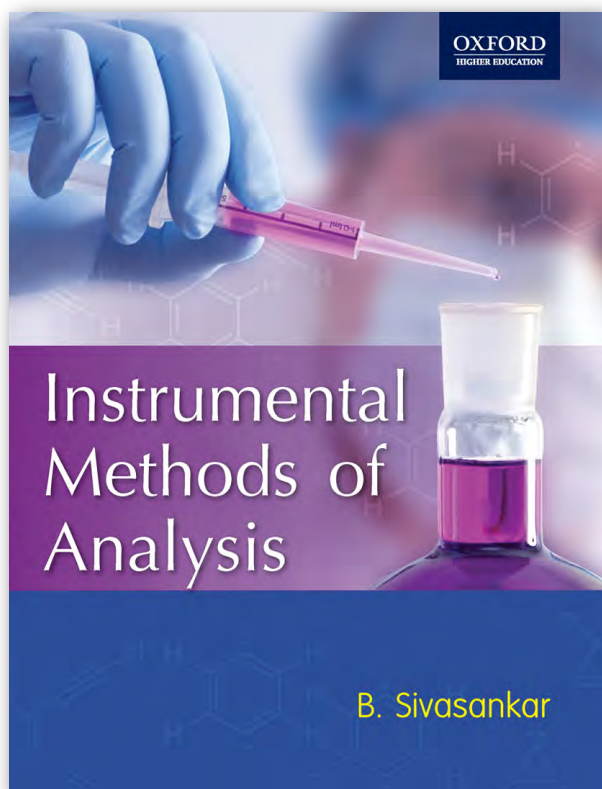
- Problems on the nomenclature of the different classes of organic compounds based on IUPAC rules, and the answers to these
- A plethora of problems on the classes of compounds with plausible mechanisms and rationalization, where necessary
- Illustrative reaction mechanisms through well-drawn diagrams with supportive explanations and comments wherever needed
- Problems on stereochemistry, spectroscopy, and pericyclic reactions
- Over 1500 solved problems addressing various topics on the subject
- Includes 700 chapter-end exercise problems to aid self-evaluation

Problems and Solutions in Organic Chemistry is primarily written for undergraduate students who have opted for an Honours course in chemistry. It will also be useful for students pursuing postgraduation in chemistry and those preparing for competitive examinations such as the Joint Admission Test for Masters (JAM), National Eligibility Test (CSIR-UGC NET), and Graduate Aptitude Test in Engineering (GATE).

About the author

Subrata Sen Gupta is the best-selling author of numerous books in the field of Organic Chemistry. A Ph D in Organic Chemistry (Calcutta University), he taught in the chemistry department of RPM College (affiliated to Calcutta University) for a period of 34 years.

eISBN: 9780199090167



Print ISBN: 9780198073918

Instrumental Methods of Analysis

Instrumental Methods of Analysis is designed to introduce various analytical and chemical methods, along with their underlying principles and applications, to the undergraduate engineering students of biotechnology and chemical engineering. This book would also be of interest to students pursuing B Sc/M Sc degree programmes in biotechnology and chemistry.

The book starts with a discussion on the basic concepts of analytical chemistry, followed by data handling and statistical analysis. Wet chemical methods that include all the conventional methods of titrimetric and gravimetric analysis are dealt with in a separate chapter. The book also discusses topics such as microscopy, optical methods, and various spectroscopic methods, x-ray methods, chromatographic methods, electrophoresis, and bulk separation methods. Description of electro-analytical methods, thermal, radioanalytical, and surface analytical methods constitutes the final chapters of the book.

Key Features

- Provides neat sketches and flow charts to explain the analytical methods
- Includes the different imaging techniques of optical microscopy, flow cytometry, phase contrast microscopy, aqueous biphasic extractions, gel filtration, and electrophoresis
- Explains the functional aspects of instruments including their operational characteristics, capabilities, and limitations
- Provides review questions and numerical examples in all relevant chapters

B. Sivasankar was formerly Professor, Department of Chemistry, College of Engineering, Guindy, Anna University, Chennai. He has more than 35 years of teaching and research experience and has also published numerous articles in reputed national and international journals.

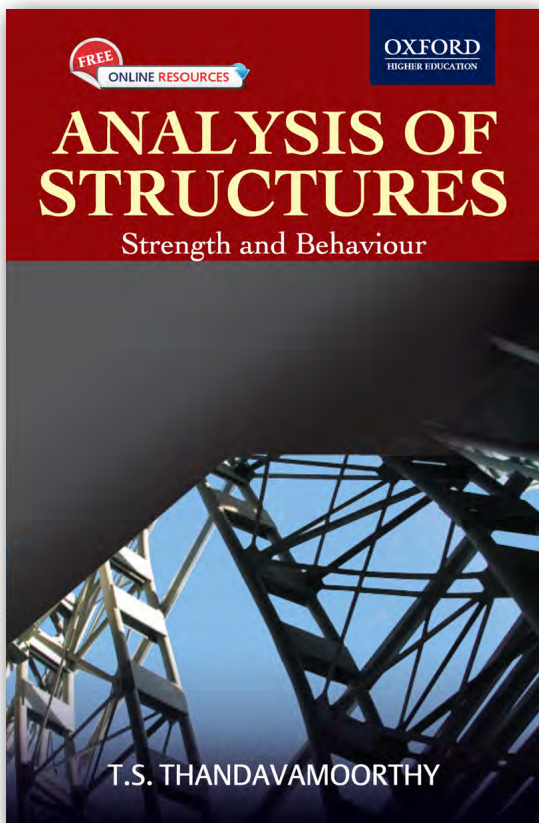
A PhD in analytical and inorganic chemistry from the University of Madras, Dr Sivasankar has guided many research scholars in specialized areas of catalysis and biocatalysis.

eISBN: 9780199084258



TOC list

CIVIL



Print ISBN: 9780195670035

ANALYSIS OF STRUCTURES

Designed for an introductory course, *Analysis of Structures: Strength and Behaviour* adopts a modern and practical approach to structural analysis. This comprehensive text integrates and unifies various concepts related to a particular structure/member under a single topic.

The book provides a balanced coverage of concepts, basic definitions, and analytical techniques in the field of structural analysis. Beginning with fundamental topics such as loads and stresses, the book exhaustively covers beams, columns, and thin-walled sections. Advanced topics such as fatigue and fracture, vibration of structures, wind engineering, and blast and earthquake response of structures are given special treatment. Important current topics such as offshore structures, safety auditing of structures, construction-induced vibration, and experimental stress analysis would equip students with the cutting edge technology in this field.

A large number of worked-out examples and problems have been provided in the text to encourage the reader towards independent problem solving. Students of engineering and AMIE as well as practising professionals would find this book extremely useful for its coverage of the latest techniques.

This student-friendly text would be very useful to undergraduate students pursuing instrumentation, electronics, and communication engineering. It would also prove to be a good text for postgraduate students of physics.

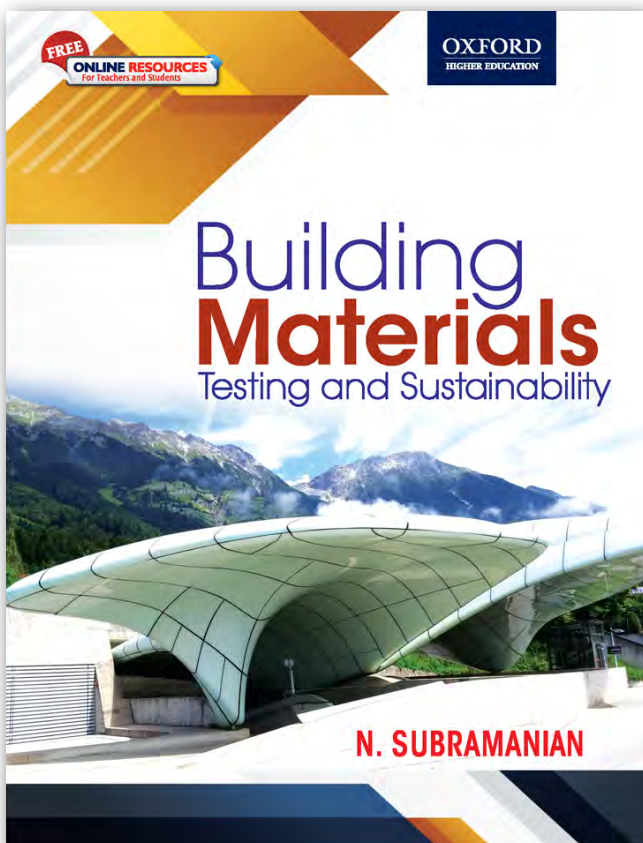
KEY FEATURES

- Includes new topics such as offshore structures, safety auditing of structures, and experimental stress analysis
- Includes a large number of illustrations and photographs to supplement the text
- Promotes self-study by including numerous solved examples and chapter-end exercises

T.S. Thandavamoorthy is presently Professor, Civil Engineering, Adhiparasakthi Engineering College, Anna University. A Ph D from Anna University and previously Dean of MGR University, Chennai, he has more than 45 years of experience both in industry and R&D. He is also a life member of the Indian Concrete Institute as well as the Society of Structural Engineers.

Dr Thandavamoorthy has published more than 250 papers in various international and national journals and conferences. He has been featured in *Who's Who in the World* (2009) and honoured as the UNESCO Ocean Expert (1998–2010). He has also authored *Structural Analysis* (OUP).

eISBN: 9780199083503



Print ISBN: 9780199497218

Building Materials

Testing and Sustainability

Building Materials, Testing and Sustainability is a comprehensive textbook designed to cater to undergraduate students of civil engineering, based on the recent AICTE syllabus on Materials, Testing & Evaluation. This book will be useful to architects (who usually specify the materials), students of diploma courses in civil engineering, and also serve as an invaluable reference to postgraduate students and practising engineers as well as researchers.

Each chapter starts with an introduction and historical review of the material discussed and proceeds to discuss about classifications, manufacture, important properties, advantages and disadvantages, green substitutes (if any), and sustainability. Traditional materials such as stones, bricks, lime, cement, mortars and plasters, aggregates, concrete, iron, steel, other metals, wood, glass, paints, as well as modern materials such as plastics, gypsum, special structural concretes, wood products, and ceramics are discussed. Thermal and sound insulating and waterproofing materials are also included. Students and engineers will find the separate chapter on testing and evaluation of these materials very useful.

Key Features

- Based on latest Indian codes
- Discussion on alternate or substitute materials like M-Sand
- Includes sustainability and health effects of various materials and recent trends
- Provides over 300 illustrative figures and photographs and 200 tables to supplement the text and 30 case studies from actual practice
- Includes more than 750 review questions and 440 multiple choice questions (with answers) to test the understanding of the students
- More than 1440 references, which include relevant Indian and American codes

Advance Praise for the Book

An outstanding book! In essence, the book is comprehensive and unique. Without any exaggeration, I am learning new information.

– Dr B Vijaya Rangan, Emeritus Professor of Civil Engineering at Curtin University, Perth, Australia

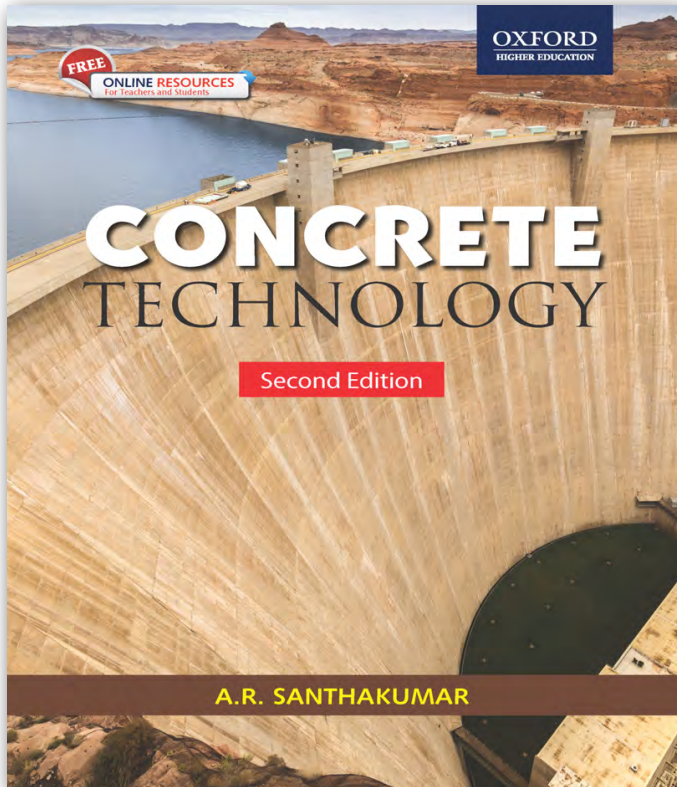
The text is easily readable, comprehensive, and well supplemented with figures and photos.

– Dr P. Suryanarayana, Professor & Former Dean (Retd), Maulana Azad National Institute of Technology, Bhopal

N. Subramanian is an award winning author, consultant, researcher, and mentor, now living in USA and former Chief Executive of Computer Design Consultants, Chennai. Three of his books have won the coveted ACCE-Nagadi Award and are prescribed as textbooks at several universities.

Cover Image: Hungerburgbahn Station in Innsbruck, Austria designed by the late British Architect Zaha Hadid and built in 2007. It is one of the world's largest doubly-curved shells, clad with white glass panels and earned the RIBA European Award of The Royal Institute of British Architects in 2008 (Photo: Dr N. Subramanian)

eISBN: 9780190992248



Print ISBN: 9780199458523

CONCRETE TECHNOLOGY

Second Edition

This second edition of **Concrete Technology** provides a comprehensive coverage of the theoretical and practical aspects of the subject and includes the latest developments in the field of concrete construction. It incorporates the latest Indian Standard specifications and codes regulating concrete construction.

The book introduces the properties of concrete and its constituent materials and discusses the role of various admixtures in modifying these properties to suit specific requirements. Topics such as ready mixed concrete, reinforcement detailing, and concrete machinery have been treated exhaustively. Also discussed in detail are special concretes such as high-performance concrete, polymer concrete, and fibre-reinforced concrete in addition to the durability, maintenance, and quality control of concrete structures. An entire chapter has been devoted to concrete structures in special environmental conditions. The book concludes with a discussion on the future trends in concrete technology.

Key Features

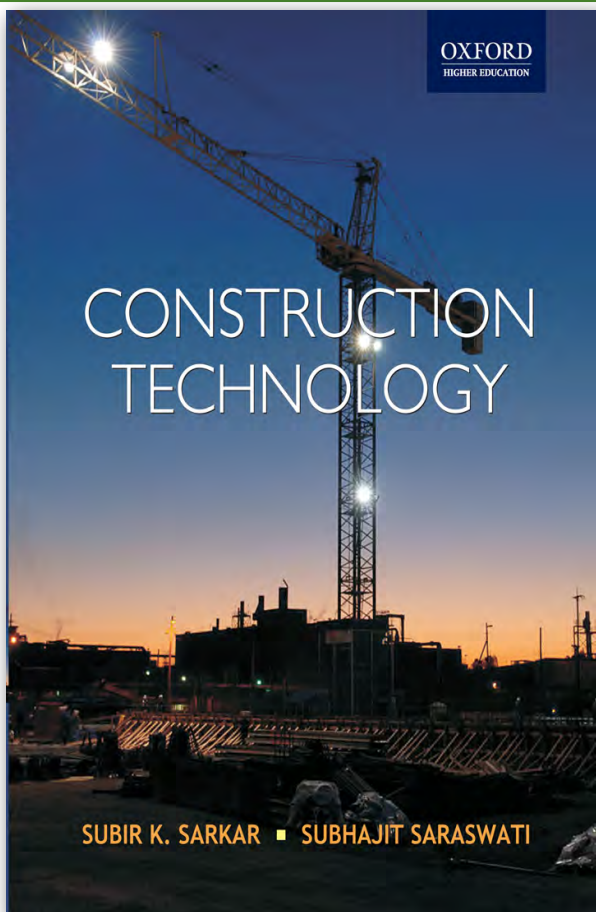
- Presents a blend of theoretical and practical aspects
- Incorporates the provisions of the code, IS: 456-2000, in concrete
- Reinforces theoretical concepts by providing solved examples and chapter-end exercises

New to the Second Edition

- A new chapter on rheological models of concrete (chapter 6) focuses on the flow characteristics of fresh concrete
- Exclusive chapters on properties of fresh and hardened concrete (chapters 4 and 7)
- A new chapter provides improved treatment of the different stages of manufacture of concrete (chapter 5)
- Updated and revised content with new sections on reactive powder concrete, pervious concrete, geopolymer concrete, and manufactured (M) sand
- Improved pedagogy with numerous additional illustrations and multiple choice questions at the end of each chapter

A.R. Santhakumar is former Dean and Chairman of the Faculty of Civil Engineering, Anna University, and former emeritus professor at the Indian Institute of Technology Madras.

eISBN: 9780199094257



Print ISBN: 9780195694833

CONSTRUCTION TECHNOLOGY

Construction Technology is designed to serve as a textbook for undergraduate and postgraduate students of construction engineering, civil engineering, and mining engineering. It provides a comprehensive coverage of all aspects of construction activities, starting from the initial survey to the completion of a project.

The book presents a detailed explanation of various topics, such as earthmoving, dredging, rock blasting, concrete technology, welding technology, steel fabrication/erection, construction of roads/highways/bridges, transportation, handling, storage, finishing work, quality control, and safety.

The lucid treatment of the subject along with the illustrative graphics of the book will facilitate easy understanding. The book blends the fundamental concepts and advanced topics of construction in a well-balanced manner, which makes it a useful reference to practicing engineers as well as project management consultants.

Key Features

- Includes illustrative graphics for easy comprehension of the text
- Explains the fundamentals of mechanization and automation
- Presents key topics such as no-dig excavation, dredging, rock blasting, welding technology, fabrication and erection of steel structures/precast RCC members
- Covers the recent developments in construction technology, starting with sophisticated surveying, mechanized construction using software for control and data recording, erection of cable-stayed and suspension bridges, etc.

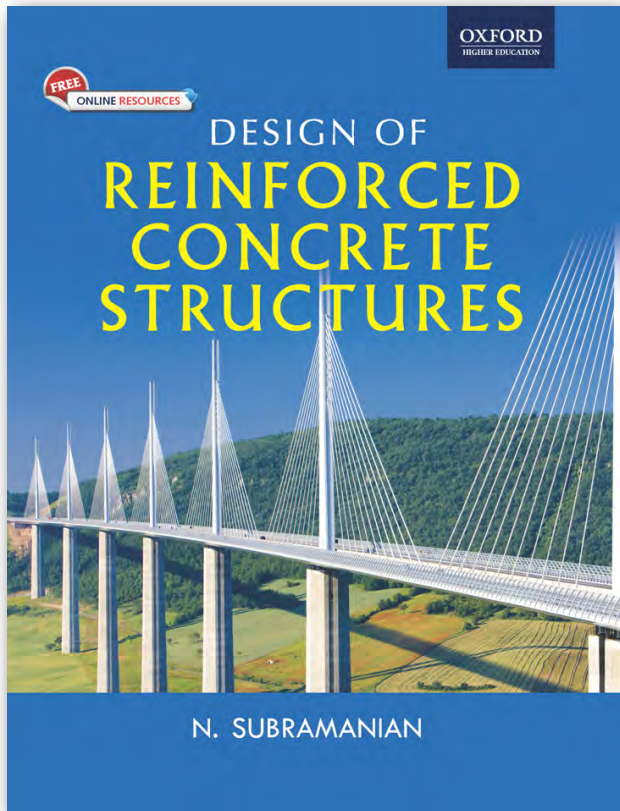
Subir K. Sarkar was a visiting faculty at Jadavpur University in the Construction Engineering Department. Prof. Sarkar was associated with project implementation, both in India and abroad, for about 40 years as a Senior Executive of Development Consultants Private Limited, Kolkata. He has contributed several technical papers to reputed national journals.

Subhajit Saraswati is currently Professor, Department of Construction Engineering, Jadavpur University as well as Coordinator, Centre for Quality Construction, Jadavpur University. Prof. Saraswati is an M Tech from IIT Kharagpur and a PhD from Jadavpur University. He has contributed several technical papers to national/international journals.

eISBN: 9780199083138



TOC list



Print ISBN: 9780198086949

DESIGN OF REINFORCED CONCRETE STRUCTURES

Design of Reinforced Concrete Structures is designed to meet the requirements of undergraduate students of civil and structural engineering. This book will also be an invaluable reference to postgraduate students and practising engineers and researchers.

This book provides an extensive coverage of the design of reinforced concrete structures in accordance with the current Indian codes of practice (IS 456:2000 and IS 13920:1993). As some of the Indian code provisions are outdated, the American code (ACI 318:2011) provisions are referred to wherever necessary. In addition, discussion on earthquake-resistant design and detailing is provided, as about 60 per cent of India falls under moderate to severe earthquake zones. The text is based on the modern limit states design and covers the behaviour of various structural elements such as compression and tension members, beams, slabs, foundations, walls, and joints. The design and detailing for flexure, shear, torsion, bond, tension, compression with uniaxial and biaxial bending, and interaction of these forces are explained. Besides, discussion on the properties of concrete, structural forms, design of anchors, and loadings makes it an invaluable guide for students and designers.

The book also provides appendices on strut-and-tie method, properties of soils, design aids, and practical tips and thumb rules that add value to the rich content of this book. For interested readers, more than 1300 references and numerous web links are provided in the chapters for further study and research.

This book is the recipient of the prestigious ACCE(I)-Nagadi Award 2013 for best publication in Civil Engineering.

Key Features

- Based on the latest version of IS 456:2000 and IS 13920:1993 and includes the latest developments and state-of-the-art trends
- Provides over 750 illustrative figures and photographs and 200 tables to supplement the theory
- Provides over 150 worked-out examples that illustrate step-by-step design processes, which facilitate easier understanding and assimilation of concepts
- Includes over 850 review questions and over 160 numerical problems to test the understanding of students
- Presents 23 case studies from actual practice that reflect on structural developments and failures
- Presents a chapter on multi-storey buildings using STAAD.Pro software

In a single volume it covers all topics both lucidly and comprehensively.

— Dr P. Suryanarayana
 Professor & Former Dean
 Maulana Azad National Institute
 of Technology, Bhopal

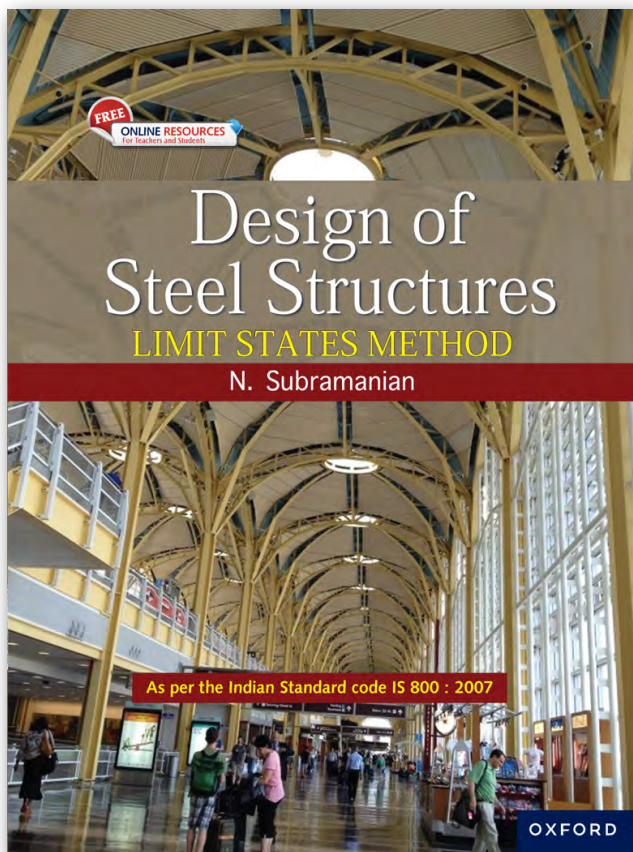
This book on concrete structures is outstanding in every way & unique in many aspects.

— Dr B. Vijaya Rangan
 Eminent Professor of Civil Engineering
 Curtin University, Perth, Australia

N. Subramanian, a consulting engineer living in Maryland, USA and former Chief Executive of Computer Design Consultants, Chennai, is an award-winning author and mentor. A Ph.D. from IIT Madras, he has 40 years of professional experience, which includes teaching, research, and consultancy in India and abroad. He has served as a consultant to many leading organizations in India and has designed several multi-storey concrete buildings, steel towers, industrial buildings, space frames, and intricate structures. Dr Subramanian has authored 25 books and more than 200 technical papers, published in international and Indian journals and conferences. He has also been a reviewer for many Indian and international journals and a fellow of several professional bodies. He has won the Tamil Nadu Scientist Award, the Lifetime Achievement Award from the Indian Concrete Institute (ICI), and the ACCE(I)-Nagadi best book award for two of his books. He also serves as a mentor at the online Structural Engineering Forum of India.

He is also the author of the immensely popular book, *Design of Steel Structures*, published by OUP India in 2008. This book won the ACCE(I)-Nagadi award 2011 for best publication in civil engineering from the Association of Consulting Civil Engineers.

eISBN: 9780199083206



Print ISBN: 9780199460915

Design of Steel Structures

LIMIT STATES METHOD

Design of Steel Structures: Limit States Method is a comprehensive textbook designed to cater to the undergraduate students of civil and structural engineering. It will also prove useful for postgraduate students and serve as an invaluable reference for practising engineers unfamiliar with the limit state design of steel structures.

This book provides an extensive coverage of the design of steel structures in accordance with the latest code of practice for the general construction in steel (IS 800:2007). The text is based on the modern limit state approach to design and covers areas such as the properties of steel, types of steel structures, important areas of structural steel technology, bolted connections, welded connections, design of trusses, design of plate girders, and design of beam-columns. Each chapter features solved examples, multiple-choice and review questions, practice problems, references, and sample illustrations that supplement the text.

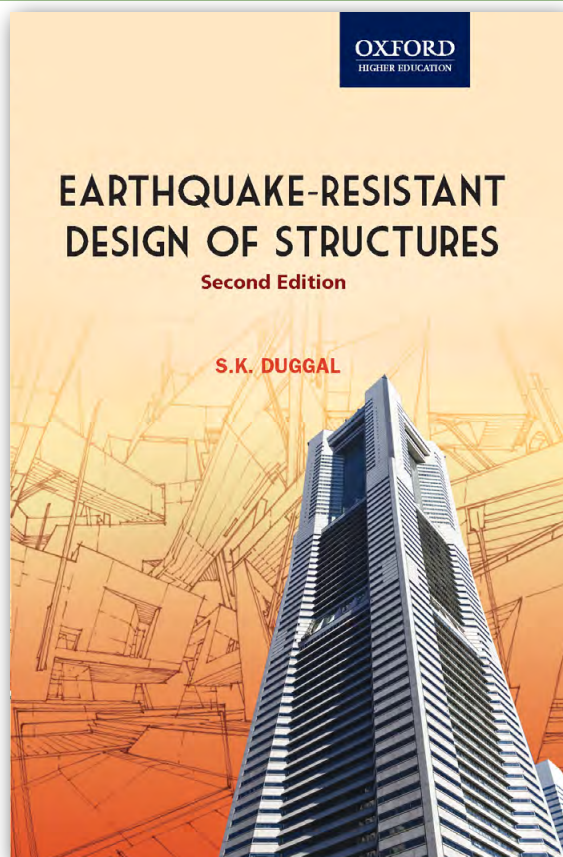
Key Features

- New chapters on Seismic-resistant Design and Design Principles for Steel Enabling Structures
- Based on the limit state method (IS 800:2007) that reflects the latest developments and is state of the art
- Exclusive chapters on Moment-resistant Connections and Design of Base Plates and Caps
- Case studies on structural failures, applications, new developments in structural design, and more new examples
- More than 200 examples, 950 figures, 200 tables, and 1000 references to facilitate a wholesome understanding of concepts
- Flowcharts for design of tension members, compression members, beams, plate girders, and gantry girders for systematic and methodical explanation of the design process

N. Subramanian is a consulting engineer and mentor now living in Maryland, USA, and former Chief Executive of Computer Design Consultants, Chennai. A Ph.D. from IIT Madras, and Post-Doctoral Fellow from TU Berlin, he has more than 40 years of professional experience that includes teaching, research, and consultancy. Dr Subramanian has authored more than 25 books and more than 230 technical papers, published in national and international journals/conferences. Three of his books have won the coveted ACCE-Nagadi award and are prescribed as textbooks at several universities.

Cover Image: Aesthetic view of the steel roof of Ronald Reagan Washington National Airport, Washington DC (Photo: Chithra Subramanian)

eISBN: 9780199099221



Print ISBN: 9780198083528

EARTHQUAKE-RESISTANT DESIGN OF STRUCTURES

Second Edition

This text is designed for undergraduate students of civil engineering. It explains the different sources of damage that can be triggered by an earthquake as well as concepts of earthquake-resistant design. The book would also be useful for postgraduate students of civil engineering, practising engineers, and architects.

Beginning with an introduction to earthquakes and ground motion, the book provides a detailed coverage of structures and soil in terms of their seismic response. The need for placing emphasis on conceptual design is reinforced by enumerating factors that cause damage and by offering guidelines for efficient earthquake-resistant design, with special attention to timber, masonry, concrete, and steel buildings.

New to the Second Edition

- Comprehensive and thoroughly revised text
- Completely revised chapter on steel buildings
- New illustrations, problems, and review questions
- New sections including the Indian plate and Himalayan earthquakes, response spectrum, hybrid seismic control systems, confined masonry construction, and lateral load transfer in timber buildings
- New appendices on determination of natural frequencies and mode shapes, and Bauschinger effect

Key Features

- Elucidates the theoretical as well as practical aspects of earthquake-resistant design of structures
- Includes a case study on the 2001 Bhuj Earthquake to facilitate insight into the effects of seismic forces on structures
- Provides standard tables both in the text and in the appendices for ready reference
- Incorporates pedagogical features such as solved problems, review questions, chapter-end exercises, and highlighted information on design specifications and norms

Praise for the First Edition

The book is well written and will be preferred by students because it is in simple English and includes solved problems.

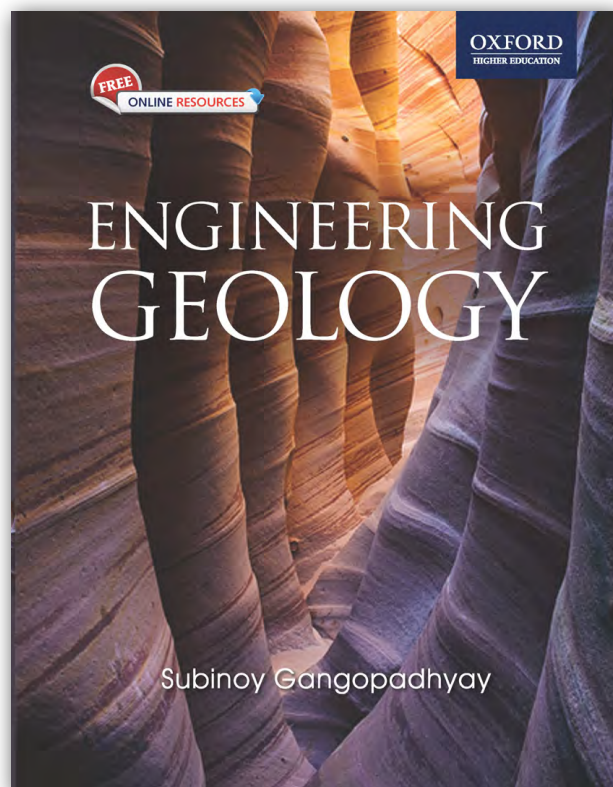
—Dr A.R. Santhakumar, Emeritus Professor (Indian Institute of Technology Madras)

On the whole, the book is very well written and shall be very useful for undergraduate students.

—Dr Bimalendu Ghosh (formerly at NIT Durgapur)

S.K. Duggal, Professor, Department of Civil Engineering, Motilal Nehru National Institute of Technology, Allahabad, has over 36 years of experience in teaching undergraduate as well as postgraduate students. A PhD from Allahabad University, Prof. Duggal has published a number of research papers in both national and international journals.

eISBN: 9780199083176



Print ISBN: 9780198086352

ENGINEERING GEOLOGY

Engineering Geology is designed as a textbook for the undergraduate and postgraduate students of engineering geology, applied geology, mining, and civil engineering. It will also serve as a reference text for civil engineers and professional geologists.

The book begins with a discussion on basic geological aspects related to rocks and minerals, geological structures, soil formation and classification, underground water, aerial photo study and remote sensing, and geophysical and drilling exploration. This is followed by important engineering geology topics such as soil and rock mechanics, methods of site investigation for civil engineering projects with detailed coverage on dams, reservoirs, tunnels, powerhouses, bridges, canals, power channels, and flumes. Some of the other important topics that are discussed in the book include the search for construction materials, treatment of geological defects, assessment and mitigation of natural hazards, and evaluation of karstic limestone terrains for reservoir projects.

Key Features

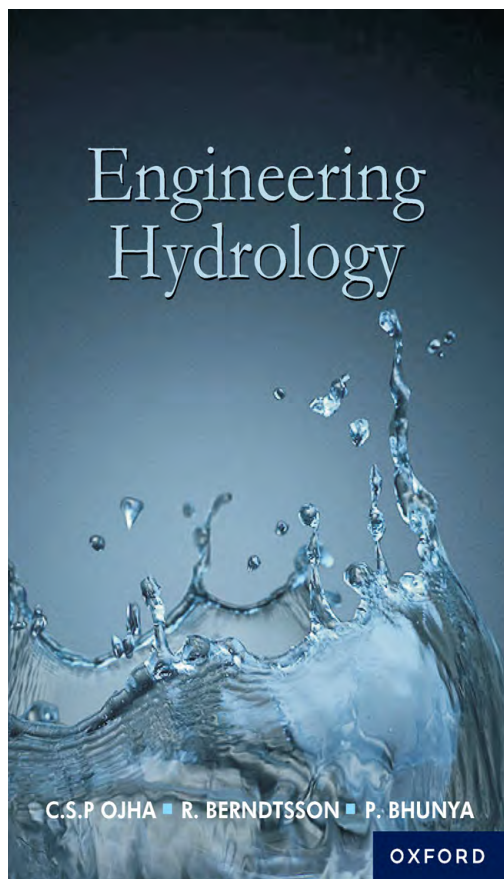
- Provides examples of various geological sites in India and closely follows the work done by the Geological Survey of India
- Explains concepts with numerous well-illustrated figures and on-the-spot pictures of geological project sites from across the country
- Includes a chapter that gives guidelines for writing geological reports which will be immensely valuable for practising civil engineers and geologists
- Enables effective recapitulation through chapter-end summary, review questions, numerical problems, and multiple choice questions
- Includes appendices comprising case studies on dams and tunnels highlighting the adverse geological conditions encountered during their construction and the remedial measures to be adopted

Subinoy Gangopadhyay was formerly Senior Director of the Geological Survey of India and has overseen the progress of more than a hundred civil engineering projects, both in India and abroad. He is also a founder member of the Indian Society of Engineering Geology.

eISBN: 9780199083213



TOC list



Print ISBN: 9780195694611

Engineering Hydrology

Engineering Hydrology is designed as a textbook for undergraduate students of civil engineering. It provides an in-depth coverage of both groundwater and surface water hydrology.

Beginning with the basics of water resources and hydrologic cycle, the book contains detailed discussions on simulation and synthetic methods in hydrology, rainfall-runoff analysis, flood frequency analysis, fundamentals of groundwater flow, and well hydraulics. Special emphasis is laid on groundwater budgeting and numerical methods to deal with situations where analytical solutions are not possible.

The book has a balanced coverage of conventional techniques of hydrology along with the latest topics, which makes it equally useful to practising engineers.

Key Features

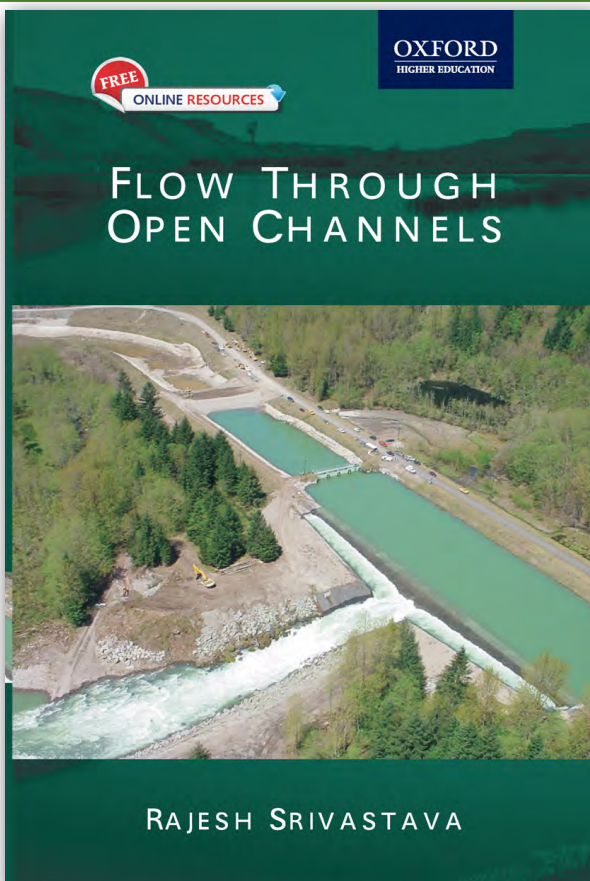
- Lays emphasis on solving various practical problems using fundamental principles
- Covers random number generators and synthetic data generation
- Puts special emphasis on basic computations related to groundwater budgeting with application of visual MODFLOW
- Provides numerous exercises and examples with exposure to numerical methods for thorough understanding of the concepts
- Includes recent research work in simulation and synthetic methods in hydrology

C.S.P. Ojha has been teaching at the Civil Engineering Department, Indian Institute of Technology, Roorkee for over 20 years. He holds a PhD in civil engineering from the Imperial College of Science, Technology and Medicine, London.

R. Berndtsson is an internationally renowned expert in the field of hydrology and holds a permanent position as Professor in Water Resources Engineering at the Institute of Technology, Lund University, Sweden.

P. Bhunya has over 12 years of experience as a scientist at the National Institute of Hydrology, Roorkee. He is a life member of various professional bodies, such as the Institution of Engineers and the Indian Association of Hydrologists.

eISBN: 9780199083534



Print ISBN: 9780195690385

FLOW THROUGH OPEN CHANNELS

Flow through Open Channels is designed to serve as a textbook for undergraduate students of civil engineering. With its lucid treatment of complicated topics, it aims to impart a clear understanding of the concepts of open channel hydraulics.

Beginning with an introductory chapter that classifies the flow into various categories, the text goes on to describe in detail uniform flow, gradually varied flow, and rapidly varied flow. It then provides a comprehensive coverage of channel transitions, spatially varied flow, and unsteady flow. A brief description of important topics such as flow in mobile bed channels and pollutants transport in open channels is also included in the text.

The book would also be useful for postgraduate students of civil engineering and also enable practising engineers to learn about new developments.

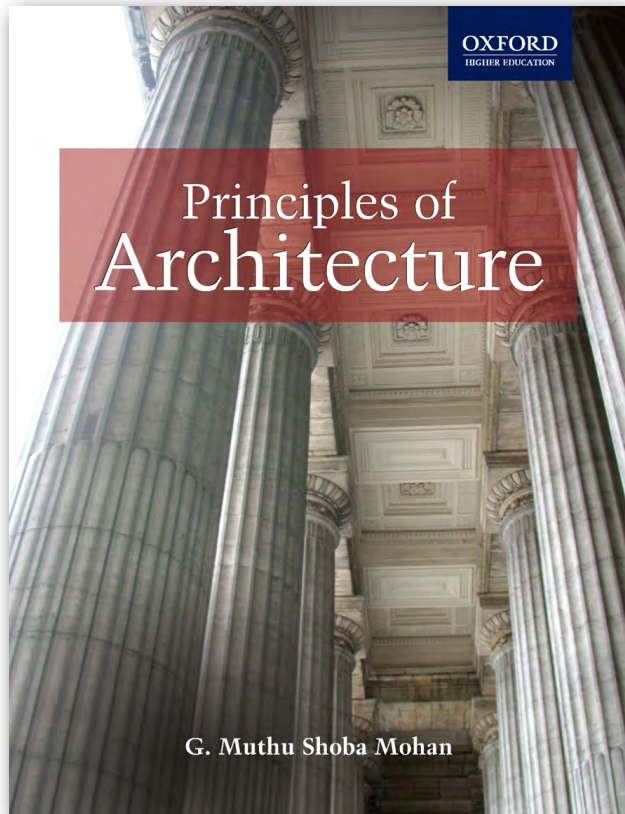
Key Features

- Devotes separate chapters to flow in mobile bed channels and pollutants transport in open channels
- Summarizes key concepts in every chapter for ready reference
- Contains solved examples with emphasis on numerical/approximate methods
- Incorporates several diagrams to aid understanding of intricate topics
- Provides plenty of end-chapter exercises

Rajesh Srivastava is currently Professor, Department of Civil Engineering, Indian Institute of Technology (IIT) Kanpur. Earlier, he served as a research scientist at Soil, Water and Environmental Science Department, University of Arizona, USA. A gold medalist from IIT Roorkee (formerly the University of Roorkee) and a PhD from the University of Arizona, Dr Srivastava has to his credit more than 70 papers published in national and international journals and presented at conference proceedings. He was awarded the GM Nawathe award for the best paper in the National Conference, Hydro, both in 2004 and 2005. He was also awarded the best paper award in the APD Conference of the International Association of Hydraulic Engineering and Research in 2006.

eISBN: 9780199083527





Principles of Architecture

The book aims at sensitizing students of civil engineering and architecture to the relationship between architecture and engineering. Designed to meet the requirements of an introductory course in architecture, the book provides the basic knowledge of architecture as a design process, which results in functionally efficient, economically viable, and aesthetically appealing buildings.

Starting with simple definitions, descriptions of basic elements, and principles of design, the book covers the core topics in architecture such as aesthetic qualities in buildings, aesthetic relationships, and aesthetic impact in detail. It also discusses safety regulations, layout regulations, and building rules. Enriched with numerous architectural examples from history, the book also presents the works and ideas of some famous architects from India and abroad.

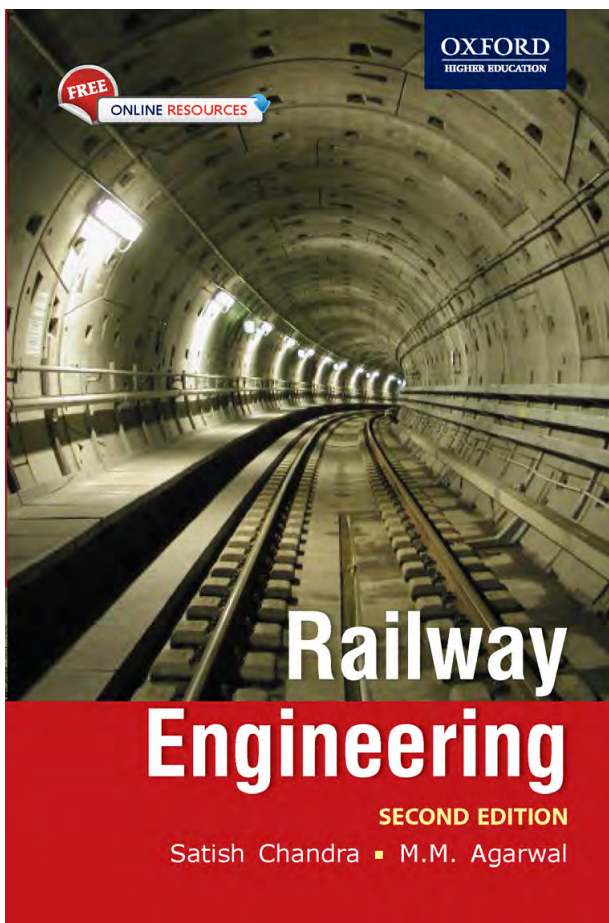
Key Features

- Uses simple and easy-to-understand language
- Explains abstract concepts with lucid illustrations
- Includes a glossary of architectural terms

A Ph.D in 'Acoustic Environment of School Classrooms in Warm-Humid Climates for Better Teaching' from the Faculty of Architecture and Planning, Anna University, Chennai, Dr. G. Muthu Shoba Mohan has more than fifteen years of teaching experience and professional practice.

Print ISBN: 9780195682724

eISBN: 9780199083510



Railway Engineering **SECOND EDITION**

The second edition of *Railway Engineering* provides an exhaustive coverage of all aspects of railways, at a level suitable for undergraduate students of civil engineering. With a balanced amalgamation of fundamental concepts and modern technological developments, this revised edition will prove equally beneficial for students of polytechnics as well as those preparing for the AMIE examination. It can also be useful as a ready reference for railway professionals.

Absorbing the latest developments on Indian Railways, the book presents various modernization plans covering tracks, locomotives, and rolling stock. To make the coverage comprehensive, it incorporates important statistical data and examples. Supplemented with a number of illustrations and examples, the text aids easy understanding of the design methods discussed.

New to the Second Edition

- New chapter on the Dedicated Freight Corridor Project and other recent developments on Indian Railways
- A complete procedure on how to calculate stresses in different components of a railway track
- Updated statistical data on Indian Railways wherever relevant
- Chapter-end exercises now include objective type questions
- Colour photographs for better illustration of the latest machinery and modern methods of track maintenance

Key Features

- Discusses advanced methods of track maintenance and track renewal
- Presents the latest developments in track design adopted by Indian Railways
- Provides the latest information on suburban railways in metropolitan cities

Praise for the First Edition

The language of the book is simple, illustrations are good. Covers almost all aspects of Railway Engineering of most university curricula.

—Prof. N.P. Kaushik (Rajasthan Technical University, Kota)

It has covered the entire general and specific aspects that one should know about railways. It's a very good basic dossier for reading and knowing different aspects pertaining to the planning, design, analysis, management and maintenance of railways.

—Dr Shrinivas Shrikant Arkatkar (Birla Institute of Technology and Science, Pilani)

Satish Chandra is currently Professor, Department of Civil Engineering at the Indian Institute of Technology Roorkee. He is an expert in the area of highway materials and traffic-flow modelling.

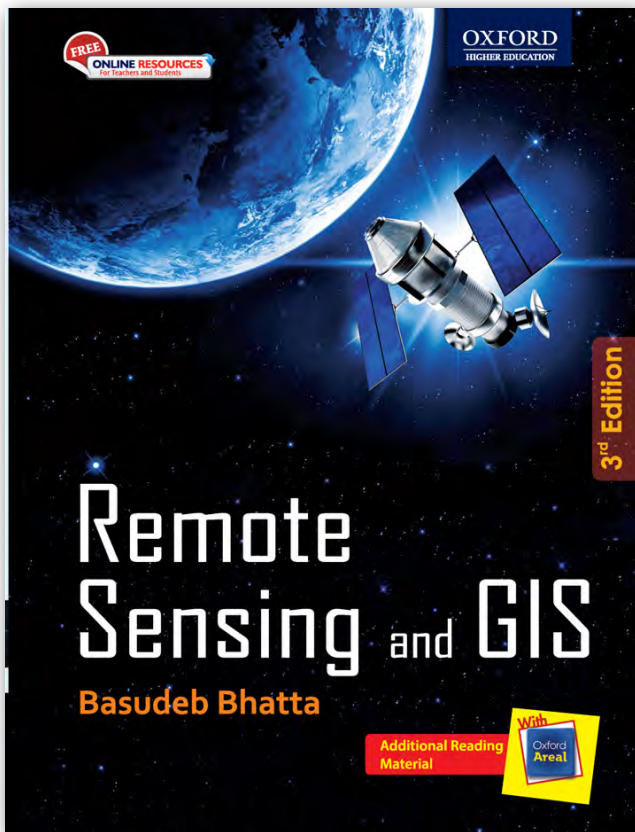
M.M. Agarwal retired as Chief Engineer, Northern Railway, and is an expert on track technology and has published numerous technical papers on track modernization.

Print ISBN: 9780198083535

eISBN: 9780199083183



TOC list



Print ISBN: 9780199496648

Remote Sensing and GIS 3rd Edition

The third edition of **Remote Sensing and GIS** is a comprehensive textbook that addresses every fundamental aspect of Remote Sensing, GNSS, and GIS. This edition will meet the requirements of undergraduate courses in civil engineering, geoinformatics/geomatics engineering, geotechnological engineering, survey engineering, and environmental engineering. This book will equally be suitable for undergraduate courses in geological science, environmental science, earth sciences, geography, geophysics, earth resources management, environmental management, and disaster management.

Key Features

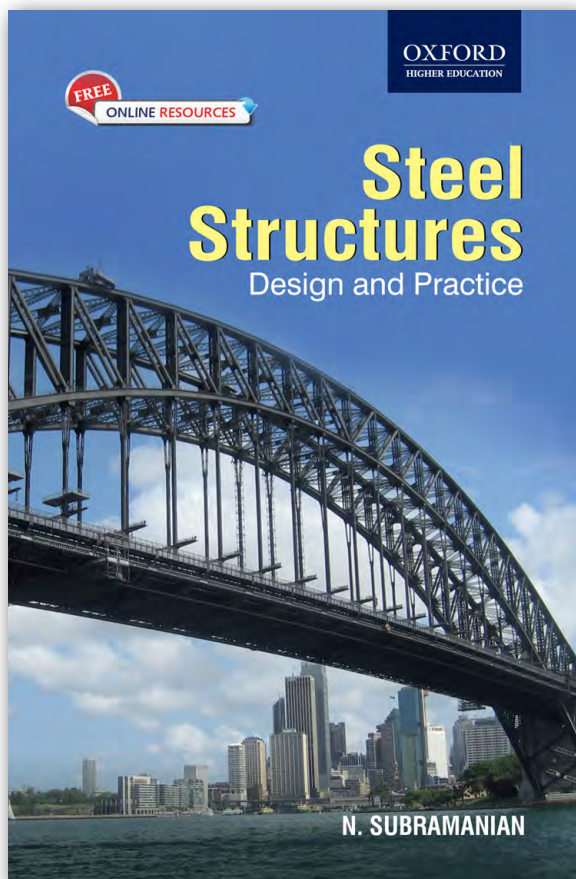
- Detailed discussion on history and basic concepts of remote sensing and GIS
- Exhaustive coverage of topics, such as optical, thermal, and microwave remote sensing, global navigation satellite systems, digital photogrammetry, visual image analysis, digital image processing, spatial and attribute data model, geospatial analysis, and planning, implementation and management of GIS
- Illustrated discussion on numerous applications of the modern trends of remote sensing and GIS
- Inclusion of appendices that provide the prerequisites required for understanding remote sensing and GIS technology

New to this Edition

- New remote sensing satellites and their sensors (e.g., Landsat-8, Sentinel series, and several others)
- Unmanned Aerial Vehicle (drone) based remote sensing
- Discussion on advancement in GNSS technology (Galileo, BeiDou, NavIC, etc.) with additional details on GNSS signals, and detailed discussion on triangulation and trilateration
- Several practical guides (e.g., on drone mapping, surveying, digital image processing, etc.)
- A new chapter on change detection and geosimulation
- 155+ additional exercises
- Online additional reading materials on Oxford Areal

Basudeb Bhatta is currently the Course Coordinator of Computer Aided Design Centre, Jadavpur University, Kolkata. He has more than 25 years of industrial, teaching, and research experience in remote sensing, GNSS, and GIS. He has published many research papers, monographs, and textbooks in Geoinformatics.

eISBN: 9780199099245



Print ISBN: 9780198068815

Steel Structures

Design and Practice

Steel Structures: Design and Practice is designed to meet the requirements of undergraduate students of civil and structural engineering. This book will also prove useful for postgraduate students and serve as an invaluable reference for practising engineers unfamiliar with the limit state design of steel structures.

A perfect blend of theory and practice, the book provides an extensive coverage of the design of steel structures in accordance with the latest code of practice for general construction in steel (IS 800 : 2007). The book is based on the modern limit state approach to design and covers topics such as properties of steel, types of steel structures, loadings and load combinations, design considerations, design of tension and compression members, beams, plate and gantry girders, beam columns, and trusses. Bolted and welded connections are also covered with ample examples. The last chapter is devoted to the design of industrial buildings which demonstrates the application of the concepts learnt in the earlier chapters.

Key Features

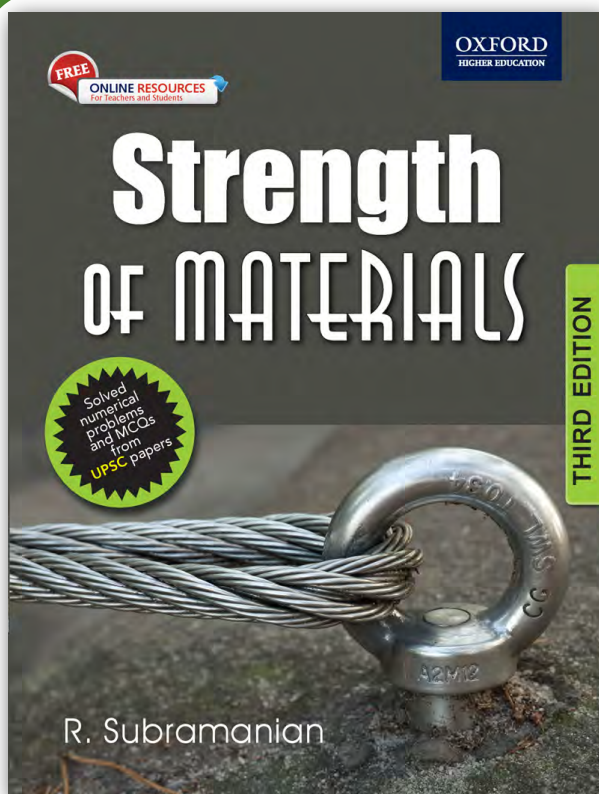
- In accordance with the latest code of practice for general construction in steel (IS 800 : 2007)
- Includes more than 100 worked-out examples, illustrating the different steps involved in the design of various structural elements
- Contains case studies in almost every chapter on structural failures, applications, and new developments in structural design
- Includes appendices on structural steel and soil properties and computer programs for beams, columns, and beam-columns

N. Subramanian is a consulting engineer and mentor living in Maryland, USA, and former Chief Executive of Computer Design Consultants, Chennai. A PhD from the Indian Institute of Technology, Madras, he has more than 30 years of professional experience which include teaching, research, and consultancy. He has served as a consultant to several leading organizations in India and has designed several multi-storey concrete buildings, steel towers, industrial buildings, steel space frames, and structures using cold-formed steel sections.

Dr Subramanian has authored several books and technical papers published in international and Indian journals and conferences. A fellow of several professional bodies, he is also the author of *Design of Steel Structures* (OUP) and *Design of Reinforced Concrete Structures* (OUP), the recipients of ACCE(I)-Nagadi Award 2011 and 2013, respectively.

eISBN: 9780199083220





Print ISBN: 9780199464739

Strength of MATERIALS THIRD EDITION

This new revised edition of *Strength of Materials* is a rich and comprehensive textbook for all undergraduate and diploma courses in civil as well as mechanical engineering disciplines. An invaluable resource for professionals and practitioners alike, the book offers crisp and precise explanation of concepts underlying the analysis and design of structures. UPSC aspirants can refer to this book for good theoretical understanding as well as for solved problems from previous UPSC examinations.

With two newly introduced chapters, Curved Bars and Beams and Stresses due to Rotation, the book not only provides a wider coverage of the subject but it also delves deeper into the chapters through its additional application-oriented solved examples. The improved illustrations depicting all the 2D and 3D structures and their sections provide a better visual readability to the book.

New to This Edition

- Two new chapters—Chapter 13: Bending of Curved Bars and Beams, Chapter 14: Stresses due to Rotation
- Additional solved examples on bearing stress, flitched beams, elongation in bars, application of Euler and Rankine's formulae, chimney subjected to wind-pressure, rotating discs and cylinders, mass moment of inertia, etc.
- Problems and multiple choice questions from previous UPSC examinations solved as ready reference for UPSC aspirants
- New application-based solved examples with different load conditions and improved illustrations for better readability
- Multiple choice questions added in exercises of every chapter

Praise for the Previous Editions

Solutions of some unique examples are given in the book. They are different from other standard books.

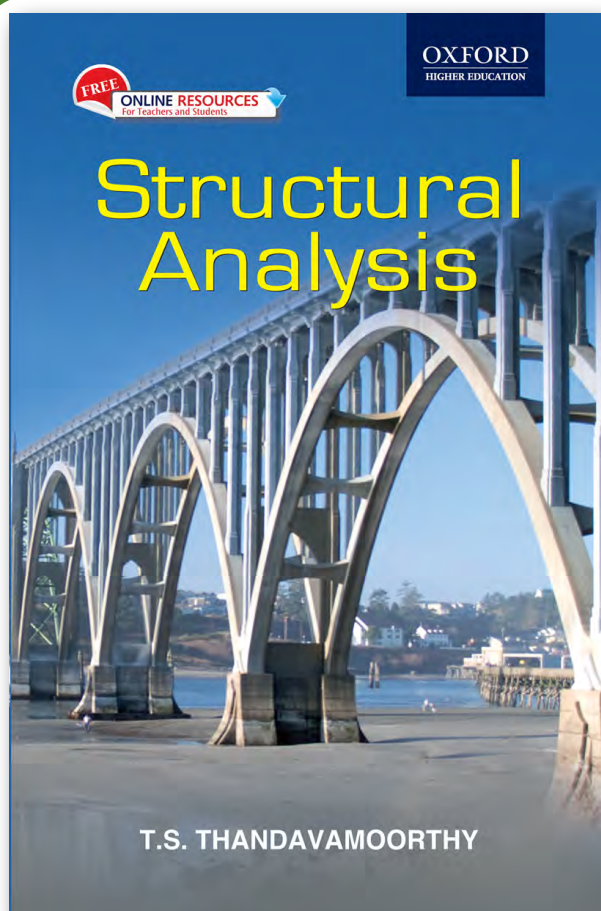
Prof. Sachin Raval, GTU

The book is an excellent reference for understanding theories in detail with wonderful examples.

Dr. Jayanta Pathak, Assam Engineering College

R. Subramanian was formerly Professor and Head of the Civil Engineering Department, National Institute of Technical Teachers Training and Research, Chandigarh. Prof. Subramanian has also authored *Strength of Materials: Theory and Problems* (2009), *Surveying and Levelling 2/e* (2012), *Professional Ethics* (2013), and *Fundamental of Surveying and Levelling* (2014), all published by OUP, India.

eISBN: 9780199099030



Print ISBN: 9780198069188

Structural Analysis

Structural Analysis is designed as a textbook for undergraduate students of civil engineering for a two-semester course. The book provides a balanced coverage of concepts, basic definitions, and analytical techniques in the field of structural analysis.

Beginning with the basic topics such as loads and forms of structures, analysis and deflection of simple beams, and strain energy theorems, the book discusses specific analysis methods for statically indeterminate structures, such as slope deflection, moment distribution, and Kani's methods. It also discusses certain advanced topics such as finite element method, plastic analysis of structures, and beams on elastic foundation.

The book contains a large number of worked-out examples and problems, which will encourage independent problem solving among the readers. Undergraduate students of engineering as well as practising professionals would find this book extremely useful due to its exhaustive coverage of analysis techniques.

Key Features

- Explains applications of various structures
- Presents over 500 detailed solved examples with step-by-step explanations
- Provides a large number of illustrations and photographs to supplement the text
- Recapitulates important formulae in every chapter
- Provides chapter-wise multiple-choice questions

T.S. Thandavamoorthy is presently Professor, Civil Engineering, Adhiparasakthi Engineering College, Anna University. A Ph.D. from Anna University and previously Dean of MGR University, Chennai, he has more than 45 years of experience both in industry and R&D. He is also a life member of the Indian Concrete Institute as well as the Society of Structural Engineers.

Dr. Thandavamoorthy has published more than 250 papers in various international and national journals and conferences. He has been featured in *Who's Who in the World* (2009) and honoured as the UNESCO Ocean Expert (1998–2010). He has also authored *Analysis of Structures: Strength and Behaviour* (OUP).

eISBN: 9780199083152



TOC list

OXFORD
HIGHER EDUCATION

FREE
ONLINE RESOURCES
For Teachers and Students

SURVEYING and LEVELLING

SECOND EDITION

R. Subramanian



SURVEYING and LEVELLING SECOND EDITION

The second edition of **Surveying and Levelling** is a comprehensive textbook that covers all aspects of the subject that are generally dealt with in two successive semesters in most universities. The book includes discussion on the most modern techniques in surveying.

The book is a well-balanced mix of basic and advanced surveying techniques. It elaborates upon chain surveying, compass surveying, plane tabling, theodolite surveying using conventional instruments, curve surveying, tachemetry, trigonometrical levelling, triangulation, photogrammetry, hydrographic surveying, and astronomical surveying. It also discusses the calculation of areas and volumes using survey data and the working of instruments such as automatic levels, digital instruments, electronic theodolites, and total stations.

The book would be useful not only for engineering students, but also for diploma students and those who appear for the AMIE examination.

Key Features

- Explains the concepts with numerous well-illustrated diagrams and photographs
- Includes more than 300 worked-out examples that aid in applying theoretical concepts to the practical field
- Provides plenty of end-chapter exercises to help revise and reinforce learning

New to the Second Edition

- Revised and expanded sections on digital levels, digital theodolites, total stations, aerial surveying methods, image processing, remote sensing, GPS, and GIS
- End-chapter exercises now include MCQs along with their answers
- Numerous additional solved examples
- Colour plates depicting modern surveying instruments

Praise for the First Edition

Covers all aspects of surveying....conceptually completely correct...figures are neatly drawn.

– Prof. H. J. Chauhan
BVM Engineering College, Gujarat Technological University

Simple and lucid language.....good presentation of the material.

– Prof. P. Venkateswara Prasad
Sri Sunflower College of Engineering & Technology, JNTU Kakinada

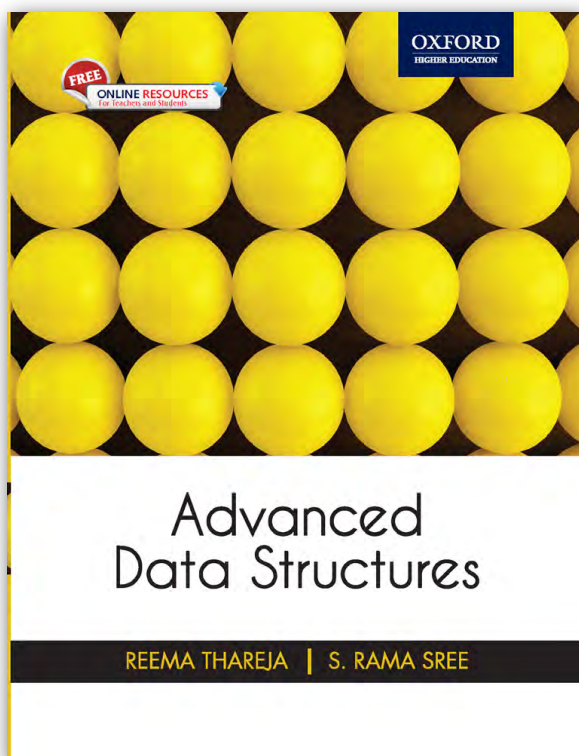
R. Subramanian was formerly Professor and Head of the Civil Engineering Department at the National Institute of Technical Teachers' Training and Research, Chandigarh. He holds a bachelor's degree in civil engineering from Kerala University and a master's degree in structural engineering from Roorkee University (now IIT Roorkee). He has over 35 years of experience in teaching subjects such as applied mechanics, strength of materials, theory of structures, and other related subjects. He has also authored *Strength of Materials: Theory and Problems* (OUP, 2010).

Print ISBN: 9780198085423

eISBN: 9780199083190



COMPUTER SCIENCE



Print ISBN: 9780199487172

Advanced Data Structures

Advanced Data Structures is designed to serve as a textbook for the advanced course in data structures offered to undergraduate as well as postgraduate students of computer science engineering and information technology. The book aims to introduce the complex and advanced concepts of data structures and illustrate their use in problem solving. It provides a comprehensive introduction to the design and analysis of advanced algorithms and data structures.

The book first deals with the concepts of sorting and hashing followed by an introduction to binary trees. It then discusses the priority queues, advanced binary search trees, multi-way search trees, and digital search trees. A chapter on graphs is also included at the end of the book.

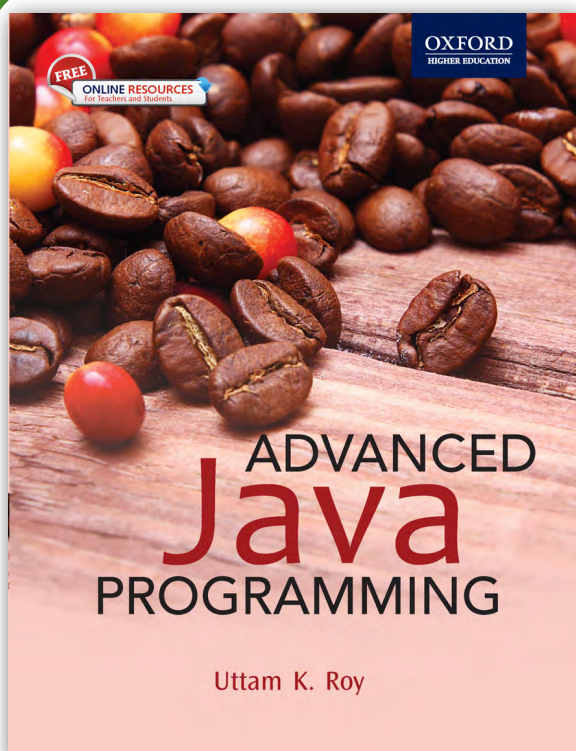
Key Features

- Provides **comprehensive coverage** for k-way merge sort, hashing techniques, heaps, AVL trees, red-black trees, B-trees, B+ trees, Patricia, digital search trees, multi-way tries, and graphs.
- Includes **algorithms** along with **examples** for each operation on the various data structures.
- Provides numerous **solved examples** and **programs** using C++ language to illustrate the application and implementation of concepts.
- Includes plenty of **chapter-end exercises** such as review questions, multiple-choice questions, fill in the blanks, and true or false questions (with answers) to help readers practise the concepts learnt.
- Provides two **solved model question papers** to help students prepare for their university's examination.

Reema Thareja is Assistant Professor, Department of Computer Science, Shyama Prasad Mukherji College for Women, University of Delhi.

S. Rama Sree is Professor, Department of Computer Science and Engineering, Aditya Engineering College, Andhra Pradesh.

eISBN: 9780199098989



Print ISBN: 9780199455508

Advanced Java Programming

Advanced Java Programming is a textbook specially designed for undergraduate and postgraduate students of courses in Computer Science Engineering, Information Technology, and Computer Applications.

Divided into three parts, the book provides exhaustive coverage of topics taught in advanced Java and other related subjects. It first introduces important language features such as Reflection, JNI, template, AWT and Swing, and Security. The second part primarily focuses on core network programming concepts—sockets, RMI, mail, and XML-RPC. State-of-the-art concepts such as SOAP, Applet, Servlet, JSP, JDBC, Hibernate, JMS, J2EE, JNDI, CORBA, and JSF have been discussed in the last part.

The content is enhanced with numerous illustrations, examples, program codes, and screenshots. With its lucid presentation and inclusion of several real-world examples and codes, the book will be useful for Java professionals as well.

Key Features

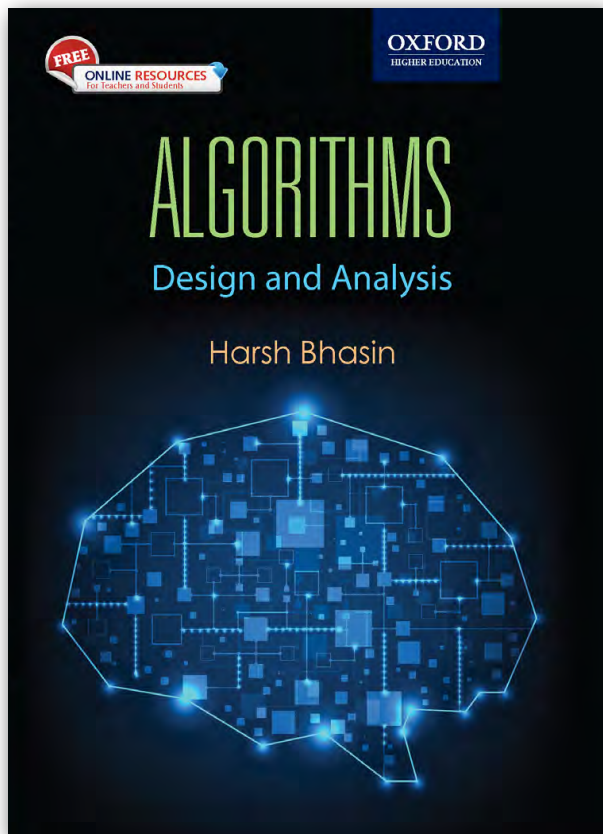
- Exhaustive coverage of topics—from Java tools to enterprise Java
- A wide range of examples along with program codes and screenshots
- Relevant software installation and configuration information, wherever necessary
- Keywords, and numerous objective-type questions (with answers) and subjective-type questions for students at the end of all chapters

Uttam K. Roy is Assistant Professor in the Department of Information Technology, Jadavpur University, Kolkata, India.

eISBN: 9780199090068



TOC list



Print ISBN: 9780199456666

eISBN: 9780199099122

ALGORITHMS Design and Analysis

Algorithms: Design and Analysis is a textbook designed for the undergraduate and postgraduate students of computer science engineering, information technology, and computer applications. It will help students understand the fundamentals and applications of algorithms. The book will serve as a useful reference for researchers and practising programmers in the field of algorithm designing as well as students preparing for interviews and competitive examinations.

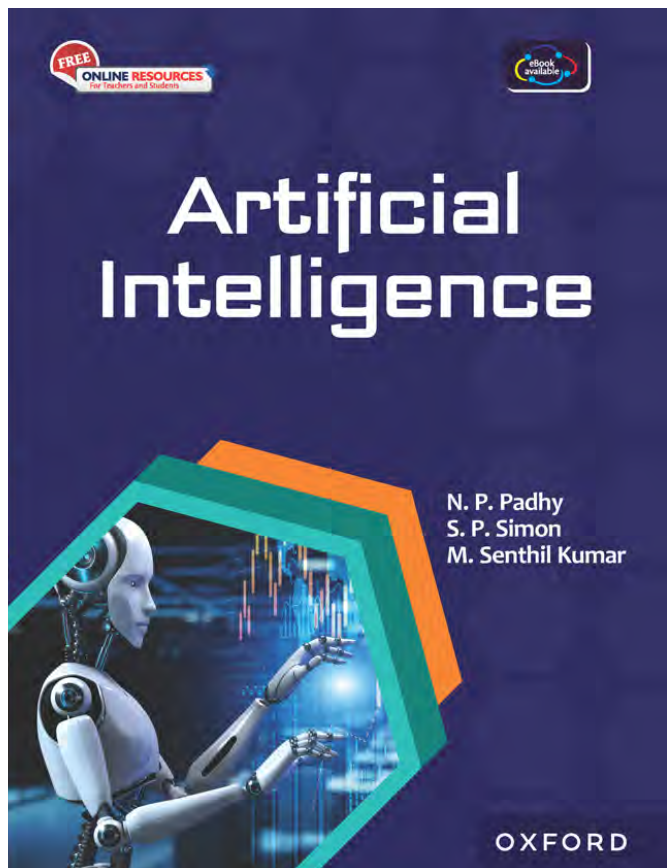
The book has been divided into four sections: Basics of Algorithms, Data Structures, Design Techniques, and Advanced Topics. The first section explains the importance of algorithms, growth of functions, recursion, and analysis of algorithms. The second section covers the basics of data structures, trees, graphs, sorting in linear and quadratic time. Section three discusses the various design techniques, namely divide and conquer, greedy approach, dynamic approach, backtracking, branch and bound, and randomized algorithms used for solving problems in detail in separate chapters. The fourth section includes the advanced topics such as transform and conquer, decrease and conquer, number theoretic, string matching, computational geometry, complexity classes, approximation algorithms, and parallel algorithms. Finally, the applications of algorithms in machine learning and computational biology areas have been discussed. Appendices of the book include topics such as probability, matrix operations, Red-black trees, linear programming, DFI, scheduling, a reprise of sorting, searching and amortized analysis, and problems based on writing algorithms.

The concepts have been explained with the help of examples, which are solved using more than one method for better understanding. Each chapter of the book includes a variety of end-chapter exercises in the form of MCQs with answers, review questions, and programming exercises to help readers test their knowledge.

Key Features

- Offers in-depth treatment of topics such as complexity analysis, design paradigms, data structures, and machine learning algorithms
- Introduces topics such as decrease and conquer, transform and conquer, and PSpace along with standards paradigms
- Explains numerical methods including Euclid's theorem and Chinese remainder theorem, and also reviews essential mathematical concepts
- Provides points to remember and a list of key terms at the end of each chapter for quick revision of important concepts
- Contains problems given at the end of each chapter and in Appendix A to that will help students prepare for their examinations and job interviews

Harsh Bhasin is currently Assistant Professor, Department of Computer Science, Jamia Hamdard, New Delhi. He has also been a visiting faculty in many colleges including Delhi Technological University.



Artificial Intelligence

N. P. Padhy
S. P. Simon
M. Senthil Kumar

OXFORD

Artificial Intelligence

Artificial Intelligence is a textbook designed for engineering students, IT professionals and researchers. It bridges the gap between Artificial Intelligence (AI) and Intelligent Systems (IS), providing a thorough understanding of both the fields and their applications. The book covers fundamental concepts, real-world problem-solving techniques, and current trends in AI, with a focus on practical applications and Python programming.

The book explores AI topics such as knowledge representation, search strategies, and machine learning. It also delves into expert systems, fuzzy systems, neural networks, and nature-inspired algorithms. Each chapter includes detailed explanations, examples, and illustrations to facilitate in-depth understanding. This book is an essential resource for students, educators, and researchers seeking to deepen their knowledge of AI and IS, and to apply these concepts to solve complex engineering problems.

Key Features

- Includes real-world examples to illustrate concepts
- Contains illustrations along with python programming in Intelligent Systems
- Covers machine learning concepts with ample exercises to learn the concept
- Includes latest topics such as deep learning neural network, machine learning and nature-inspired algorithms
- Provides numerous illustrations, examples, and end-chapter exercises for better retention of the concept

N. P. Padhy is Professor (HAG), Department of Electrical Engineering, IIT Roorkee, is currently serving as the Chairperson (I/C) of the Board of Governors MNIT Jaipur, the Director of MNIT Jaipur and the Director of IIIT Kota, the Chair Professor of IIT Palakkad Technology IHub Foundation (IITF).

S. P. Simon is Professor, Department of Electrical and Electronics Engineering, National Institute of Technology (NIT), formerly the Regional Engineering College, Tiruchirappalli, Tamil Nadu, India.

M. Senthilkumar is an Assistant Professor, Department of Electrical Engineering, National Institute of Technology Patna.

Supplementary Digital Support

QR codes included with relevant examples to access additional Python programs, enhancing the understanding of the concept discussed in the example.

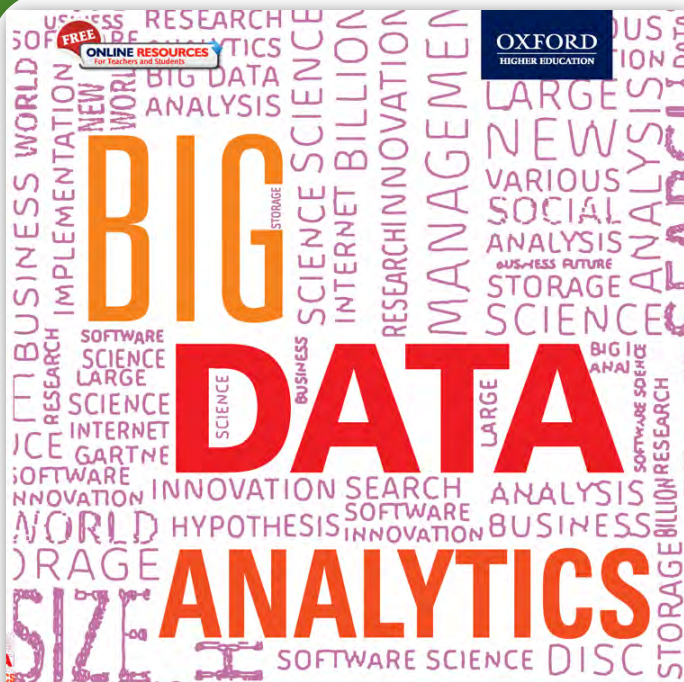
ONLINE RESOURCES <https://india.oup.com/orcs/9789361032752>

The following resources are available to support the faculty and students using this text:

- | | |
|---------------------|----------------------|
| For Faculty | For Students |
| • PowerPoint Slides | • Projects |
| • Solutions Manual | • Reference Sections |

Print ISBN: 9789361032752

eISBN: 9789367252444



G. SUDHA SADASIVAM | R. THIRUMAHAL

Print ISBN: 9780199497225

BIG DATA ANALYTICS

Big Data Analytics presents a comprehensive treatment of the subject for undergraduate and postgraduate students of computer science and engineering, information technology, and other related disciplines.

The book has been written to cover the basics of analytics before moving to big data and its analytics. It seeks to translate the theory behind big data into principles and practices for a data analyst.

The text is categorized into 4 sections:

- Basics of big data and NoSQL systems
- Tools and frameworks for handling big data
- Theory and methods of big data analytics
- Infrastructure for big data

Key Features

- **Chapter outlines and learning outcomes** listed at the start of each chapter
- **Illustrative discussion** on big data frameworks and infrastructure
- **Algorithms** for data analytics on big data frameworks and tools
- **Solved numerical examples** to supplement the text
- **Practice exercises and codes** for various case studies on Hadoop, R, Spark, MongoDB, Storm, and Neo4j
- **Interview questions** highlighted as boxed items in each chapter
- **Point-wise summary** at the end of each chapter to enable quick revision
- **Chapter-end exercises** comprising objective-type questions with answers, critical thinking questions, descriptive type questions, and numerical exercises

G. Sudha Sadasivam is Professor and Head of the Department of Computer Science and Engineering, PSG College of Technology, Tamil Nadu. Her areas of interest include distributed computing and big data analytics.

R. Thirumahal is Assistant Professor (Selection Grade) in the Department of Computer Science and Engineering, PSG College of Technology, Tamil Nadu. Her areas of expertise include data integration, big data analytics, and machine learning.

eISBN: 9780190993092



Print ISBN: 9789361034688

Blockchain Technology

Blockchain Technology serves as an essential guide for undergraduate and postgraduate students of computer science, illuminating the revolutionary potential of this groundbreaking innovation. This comprehensive resource invites readers to dive into the intricacies of blockchain, exploring its origins, mechanics, and the myriad applications that extend far beyond cryptocurrency.

The book is thoughtfully divided into five parts: Part 1: Introduction to Blockchain lays the foundational concepts, demystifying the technology and its significance in today's digital landscape. Part 2: Bitcoin explores the premier and most renowned cryptocurrency, elucidating its mechanics, security features, and impact on the financial landscape. Part 3: Ethereum explores its decentralised ecosystem, apps and smart contracts, demonstrating how it broadens the potential of blockchain technology. Part 4: Hyperledger Fabric is a business solution that enables secure and scalable blockchain networks for businesses. Finally, Part 5, Blockchain Use Cases, is packed with real-life examples and case studies, illustrating blockchain's diverse applications, including enhancing security in financial transactions, transforming supply chains, and empowering decentralised applications.

Key Features

- Simple and lucid descriptions of complex blockchain concepts, using relatable analogies to enhance understanding.
- Pictorial representations and problem-solving illustrations for each blockchain operation, ensuring readers can visualize transformations effectively.
- Real-world case studies that demonstrate the practical applications and power of blockchain technology in various sectors.
- Each section builds on the previous one, addressing challenges in earlier technologies and showcasing how blockchain overcomes them.
- A glossary of key terms and concise summaries at the end of each chapter to facilitate quick revision of important concepts.
- Chapter-end questions designed to encourage critical thinking and exploration of upcoming concepts independently.

J. Indumathi is Professor at the Department of Information Science and Technology at Anna University, Chennai. She is known for her broad interdisciplinary expertise on various subject areas, including Blockchain technologies, Cyber Forensics, Information Security Analytics, Privacy, Software Project Management, and FinTech.

Supplementary Digital Support

Chapter-wise QR codes provided to access the following supplementary resources:

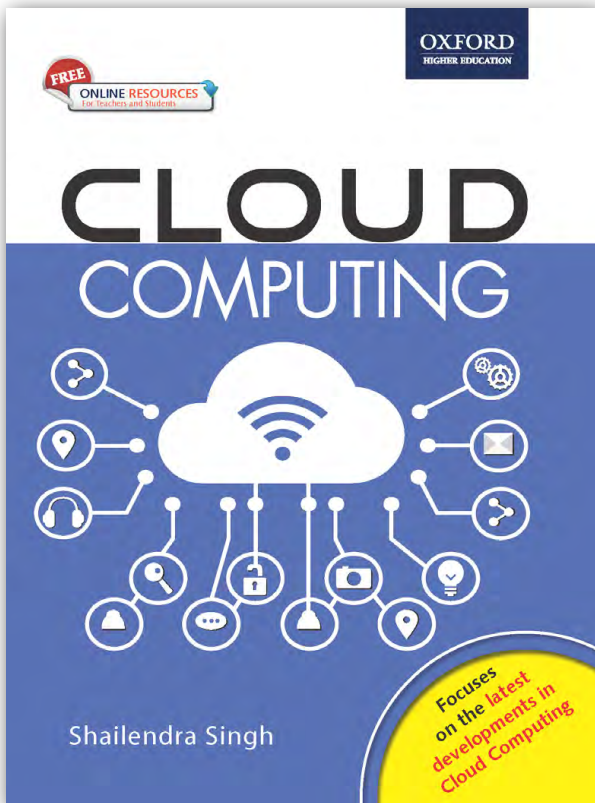
- Conceptual Questions (based on Blooms Taxonomy Levels)
- Multiple Choice Questions (MCQ)
- Interview Questions with clues
- Match the Following

ONLINE RESOURCES <https://india.oup.com/orcs/9789361034688>
The following resources are available to support the faculty and students using this text:

The following resources are available to support the faculty and students using this text:

For Faculty	For Students
• PowerPoint Slides	• Projects
• Solutions Manual	• Reference Sections

eISBN: 9789367255230



Print ISBN: 9780199477388

CLOUD COMPUTING

Cloud Computing is a textbook designed for the undergraduate computer science and information technology students of all Indian universities for an introductory course on the subject.

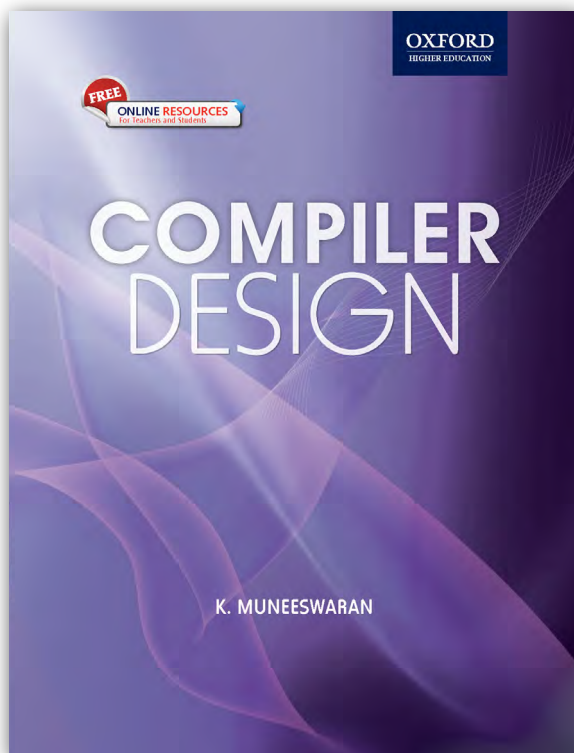
Beginning with the origin of the subject and also the major factors influencing and shaping the very discipline, the book details upon the architecture, models, cloud data center, virtualization concepts both at the system and network level. Infrastructure, security, and platforms which are considered central to the subject have been discussed as separate chapters. The last chapter of the book is devoted to the futuristic trends outlining topics such as application specific cloud computing, groupware cloud, T-Systems, and CometCloud.

Key Features

- 💡 Discusses cloud computing models, cloud data center, virtualization technology both at the system and network level, and the architecture in detail
- 💡 Covers topics such as Cloud Platforms and Security, that are central to the subject, in separate chapters
- 💡 Provides a well-written points-to-remember section, review questions, key terms with explanation, and multiple-choice questions at the end of every chapter
- 💡 Includes appendices with study of Amazon network, Microsoft, Salesforce.com, Eucalyptus, Aneka, and Hypervisors
- 💡 Comes with Model Question Papers from different universities

Dr Shailendra Singh is Professor, Department of Computer Science and Engineering, National Institute of Technical Teachers' Training and Research (NITTTR), Bhopal. He has over 20 years of experience in teaching, research, training, and curriculum design. His areas of academic interest include supporting vector machines, machine learning, network security, and image processing.

eISBN: 9780199098910



Print ISBN: 9780198066644

COMPILER DESIGN

Compiler Design is designed as a textbook for undergraduate and postgraduate students of engineering (computer science and information technology) and computer applications. It seeks to provide a thorough understanding of the design and implementation aspects of a compiler.

The book commences with an overview of system software and briefly describes the evolution, design, and implementation of compilers. Detailed explanation of the various phases involved in the design of a compiler, such as lexical analysis, syntax analysis, run-time storage organization, intermediate code generation, code optimization, and final code generation, is provided in various chapters of the book. The last chapter describes in brief all the frequently used compiler writing tools, with examples and program codes.

Written in a lucid manner, the book provides numerous examples, algorithms, pseudocodes, and C codes to support the text. Chapter-end exercises and appendices are provided to help students revise and practise the concepts learnt.

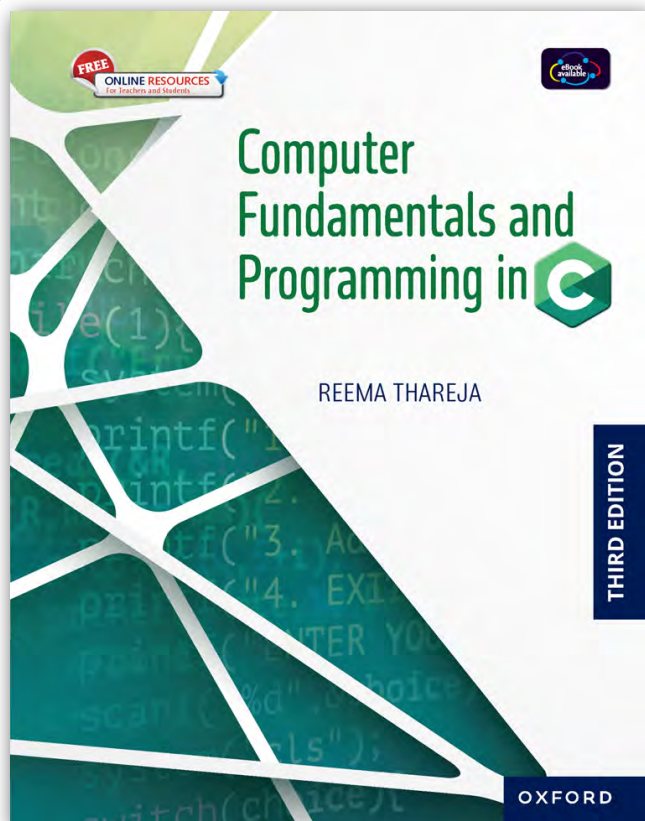
Key Features

- Contains a dedicated chapter on compiler writing tools, including Lex, Yacc, JavaCC, and ANTLR
- Provides numerous objective type questions with answers, review questions, and exercises at the end of every chapter, graded as per Bloom's Taxonomy principles
- Includes appendices on the parsing of C language using tools such as Lex, Yacc, and JavaCC, additional solved problems, and five model question papers

K. Muneeswaran is presently the Head of the Department of Computer Science and Engineering at Mepco Schlenk Engineering College, Sivakasi. A PhD from M.S. University, Tirunelveli, Dr Muneeswaran has nearly 27 years of teaching experience and has published various national- and international-level papers in reputed journals. He is also a life member of organizations such as the Computer Society of India (CSI) and Indian Society for Technical Education (ISTE).

eISBN: 9780199094356





Print ISBN: 9789354977893

eISBN: 9789354978395

Computer Fundamentals and Programming in C

THIRD EDITION

The third edition of *Computer Fundamentals and Programming in C* is an essential guide to understanding the fundamentals of computer systems and programming using the C programming language. The book begins with an introduction to the basic concepts of computing and an overview of the essential components of a computer system, including hardware, software, and data.

The book then dives into the basics of programming using the C language, covering topics such as data types, operators, control structures, functions, and arrays. Readers will learn how to write and execute C programs using various programming techniques, including debugging, modular programming, and file handling.

With clear explanations and practical examples, the book is an ideal resource for beginners looking to learn programming or for experienced programmers seeking to expand their knowledge and skills in C programming. The book is a valuable reference for anyone interested in software development, information technology or computer science.

New to the Third Edition

In this edition, we have added the following new topics in the appropriate chapters:

- A section on Type-C (Or USB-C Port) and comparison between RAM and ROM
- Wireless input devices like speaker, printer, 3D printer
- Lab Activities on working with Google drive to store data on cloud
- Updates on MS Office 2019 and Windows 11

- Types of computer software and customized software
- Generic software development vs specific-purpose software
- Latest updates in versions of C
- A new Appendix on emerging technologies in the field of computer science such as Artificial Intelligence, Blockchain Technology, Metaverse, etc.

Key Features

- Provides exhaustive coverage of computer fundamentals, focusing on both the hardware as well as software components
- Offers a detailed coverage of different types of number systems and computer codes
- Covers user-defined data types (arrays, strings, structures, unions) in detail, with each of the operations on these data types implemented using numerous example codes
- Includes case studies after select chapters

Praise for the Previous Edition

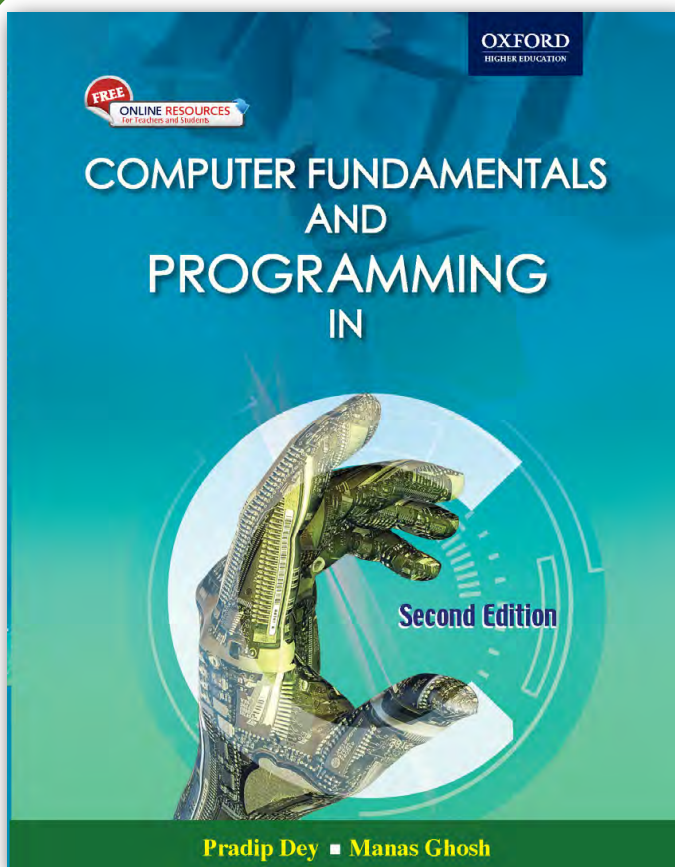
Objective questions are very useful for GATE/NET and other competitive exams.

— Naresh E, MSRT, Bangalore

The fact that I found this book in the library of Stanford University in itself is a big compliment. I am teaching from this book and my students find it an excellent book to follow.

— Arijit Das, Naval Postgraduate School, California, USA

Reema Thareja is presently Assistant Professor, Department of Computer Science, Shyama Prasad Mukherji College for Women, University of Delhi.



Print ISBN: 9780198084563

eISBN: 9780199083800

COMPUTER FUNDAMENTALS AND PROGRAMMING IN C

The second edition of *Computer Fundamentals and Programming in C* is designed to serve as a textbook for students of engineering (BE/BTech), computer applications (BCA/MCA), and computer science (BSO) for an introductory core course on computers and programming in C. It provides a thorough understanding of the subject and its applications.

The book begins with an introduction to the basic features of a digital computer, number systems and binary arithmetic, Boolean algebra and logic gates, software, operating systems, and the Internet. A major part of the book provides a detailed coverage of programming in C. It discusses the primary functions of compilers, linkers, and loaders, and provides an exhaustive coverage of concepts such as data types, control statements, arrays, strings, functions, pointers, structures, file systems, and command-line arguments. This edition also highlights C99 features wherever relevant in the text.

Key Features

- Offers plenty of application-based solved examples
- Explains the fundamental concepts of programming in C
- Illustrates widely used library functions with program codes and test cases
- Highlights the common mistakes to indicate the possible problem areas
- Highlights C99 features wherever relevant in the text
- Provides numerous review questions and programming exercises at the end of each chapter

New to the Second Edition

- C99 features highlighted wherever relevant in the text
- New chapters: Introduction to Software; Internet and the World Wide Web
- Extensive reorganization of the computer fundamentals and functions chapters
- Points to Note, Check Your Progress sections, Key Terms, Frequently Asked Questions, and Project Questions with each chapter
- Improved explanation of algorithms and codes, and new in-text examples
- New sections such as error-detecting and error-correcting codes, working with complex numbers, variable length arrays, searching and sorting algorithms, pointer and const qualifier, and applications of linked lists

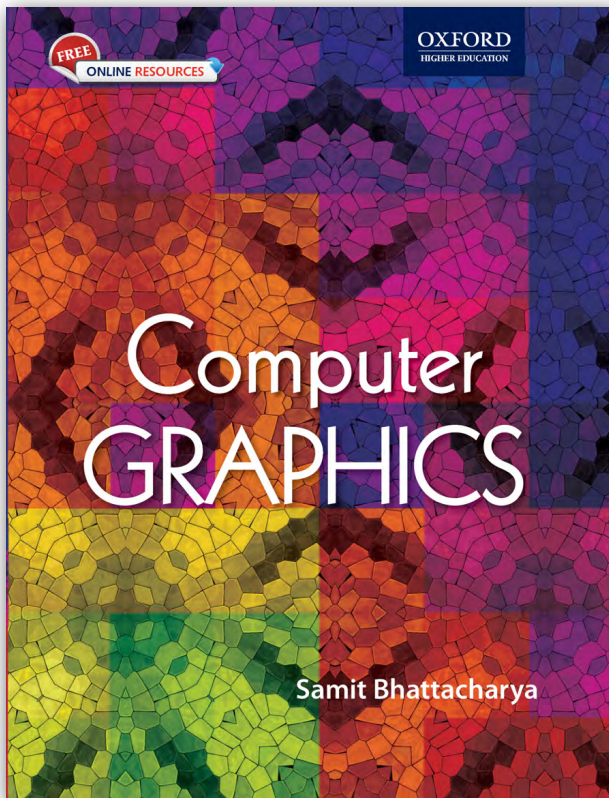
Pradip Dey, currently a faculty member at the ROC Institute of Information Technology, Kolkata, has over 15 years of teaching experience and about 24 years of industry experience.

Manas Ghosh, also a faculty member at the ROC Institute of Information Technology, Kolkata, has over 13 years of experience in teaching and software development.

This author pair has also authored *Programming in C, 2e* (OUP, 2011).



TOC list



Print ISBN: 9780198096191

Computer GRAPHICS

Computer Graphics is a textbook aimed at undergraduate students of computer science engineering, information technology, and computer applications. It seeks to provide a thorough understanding of the core concepts of computer graphics for a one-semester course.

The chapters in the book are organized following the 3D graphics pipeline stages. In the first chapter, the 3D graphics pipeline is explained. Subsequent chapters deal with the various stages of the pipeline, namely the object representation techniques, modeling/geometric transformations, illumination and lighting models, texture modeling and intensity representation, 3D viewing, clipping, hidden surface removal, and scan conversion. The last few chapters of the book cover advanced topics such as graphics hardware, multimedia, hypermedia, and computer animation, which are intended to widen the knowledge base of the reader.

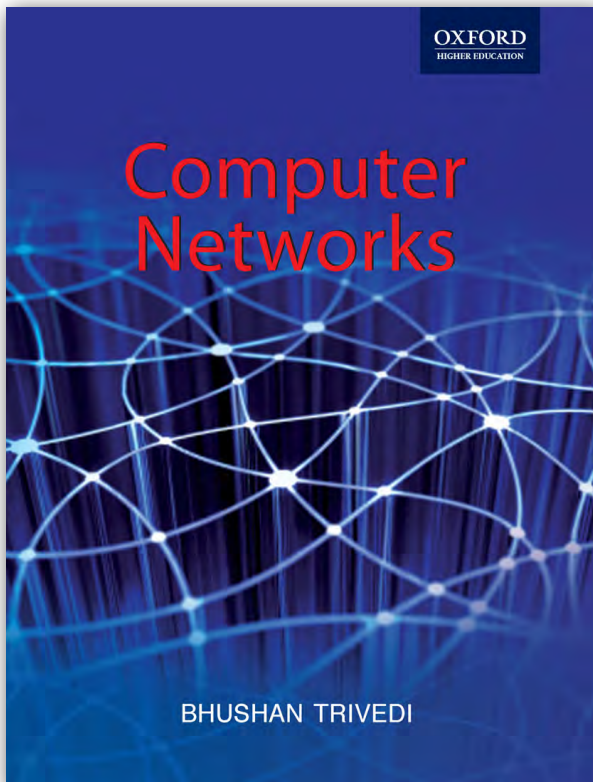
Adopting an algorithmic approach to explain various techniques, the book provides solved problems and interesting chapter-end exercises for practice.

Key Features

- Follows the 3D graphics pipeline based discussion—a technique that helps students grasp 2D/3D concepts quickly
- Adopts an algorithmic approach to help students develop programs in any programming language of their choice
- Contains a separate chapter focusing on multimedia and hypermedia
- Provides a chapter on graphics hardware including a discussion on GPU fundamentals and the latest monitor technologies such as plasma panels, light-emitting diode (LED) displays, and liquid crystal displays (LCDs)

Samit Bhattacharya is currently Assistant Professor in the Department of Computer Science and Engineering, IIT Guwahati. Dr Bhattacharya has about 7 years of teaching experience at both the undergraduate and postgraduate levels.

eISBN: 9780199090228



Print ISBN: 9780198066774

Computer Networks

Computer Networks is designed to serve as a textbook for undergraduate students of computer science engineering as well as those pursuing MCA and IT. Following the tried-and-tested layered approach, it gives equal weight to all the network layers and their protocols.

Written in a lucid language, the book first acquaints the reader with the fundamentals of networks and presents an overview of data communications before plunging into the depths of networks to unearth their underlying concepts. Exhaustive in its coverage, the book explains the concepts of OSI model, TCP/IP, UDP, fiber optic communication, IEEE 802 wireless standard, various network protocols, and other advanced concepts in great detail. Besides, it has a dedicated chapter on cryptography and network security.

With a well-balanced mix of theory and practice, the book features plenty of logical analogies and provides a rich combination of examples and exercises to help students assimilate the theory.

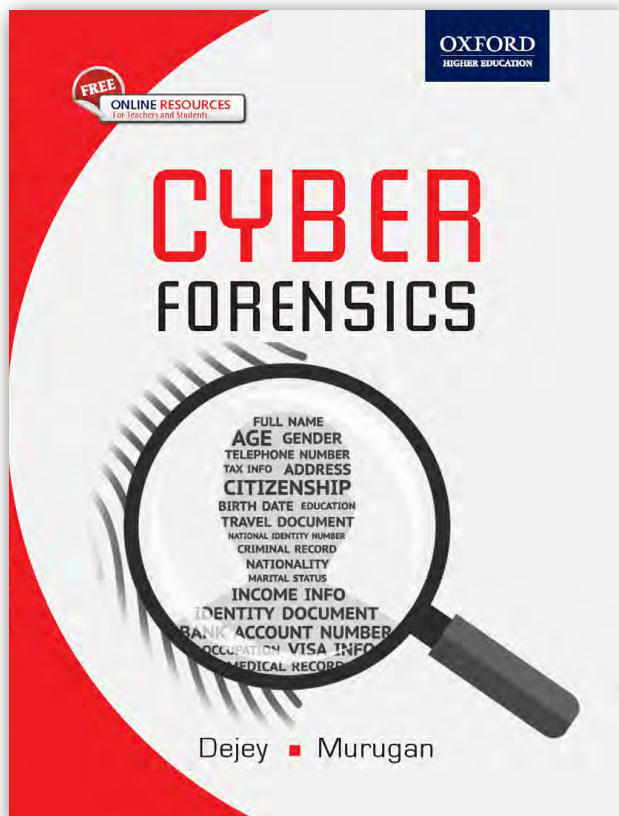
Key Features

- Incorporates the layered approach with emphasis on TCP/IP model, Internet, and Ethernet technologies
- Explains several new topics like Bluetooth, IPv6, QoS provided by WiMax, and the use of scalable OFDM in 802.16
- Includes ample exercise questions to test the understanding of students
- Provides eye-catching sidebars that supply ancillary information

Bhushan Trivedi is currently Director, MCA Programme, at the GLS Institute of Computer Technology, Ahmedabad. He has over 20 years of experience in teaching postgraduate students of computer applications. A veteran in his field, Prof. Trivedi has held several coveted posts including the Director of the MCA department of Gujarat Vidyapeeth. He is the author of *Programming in ANSI C++* (OUP).

eISBN: 9780199083725





Print ISBN: 9780199489442

CYBER FORENSICS

Cyber Forensics is a textbook designed for the undergraduate engineering students of Computer Science and Information Technology programmes for the related course. The book will be equally useful as a primer for students from diverse backgrounds to help understand how cyber media is misused for committing crimes. It will also be useful for cyber forensic professionals, cybercrime investigators, and computer professionals for implementing security measures to protect their digital assets.

Beginning with a chapter on computer networks and security, the book moves on to discussing cybercrime, its classification, and its contemporary and future trends in the subsequent chapters. The core concepts of forensic principles, processes and tools used, and cases are discussed at length in the succeeding chapters, before ending with dedicated chapters on cyber laws, both in the Indian and international contexts, along with interesting case studies.

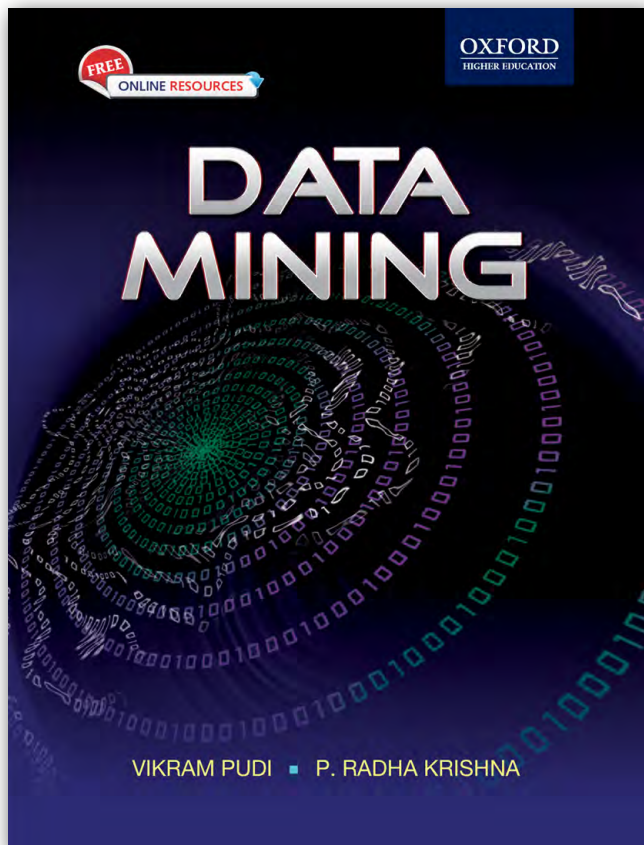
Key Features

- Provides a perfect balance of discussion on cybercrime, forensics, and cyber laws (both Indian and international)
- Discusses principles, processes, and case studies for a better grasp of concepts
- Introduces a fundamental chapter on computer networks and security
- Provides a model case example report as an appendix for a better understanding of how forensic examination findings are reported and documented

Deje is currently Assistant Professor in the Department of Computer Science and Engineering, Anna University Regional Campus, Tirunelveli.

S. Murugan is a 1997 batch Indian Police Service (IPS) officer and currently the Inspector General (IG) of Police and Joint Director, Vigilance and Anti-corruption, Chennai.

eISBN: 9780199099160



Print ISBN: 9780195686289

DATA MINING

Designed to serve as a textbook for undergraduate and postgraduate students of engineering and computer applications, *Data Mining* imparts a clear understanding of the algorithms and techniques that can be used to structure large databases and then extract interesting patterns from them.

Written in a reader-friendly manner, the book begins with an introduction to the main analytical techniques used in data mining practices, providing a brief history along with a discussion of related fields such as statistics, pattern recognition, and artificial intelligence. The subsequent chapters are devoted to a thorough coverage of data mining concepts and techniques that include association analysis, classification techniques, clustering, and mining complex data objects. Detailed algorithms are presented with the necessary explanations, pseudo-codes, and analysis to ease their efficient implementation.

Extending the discussion further, the book furnishes an overview of data warehousing, with an emphasis on its underlying architecture and query processing, followed by a few case studies to illustrate the practical aspects of the subject. The book concludes with a ten-point vision of the future of data mining.

Supplemented with a number of simple illustrative examples and numerous exercises for each technique discussed, the text is ideal for classroom learning.

Key Features

- Supplies an exhaustive and detailed coverage of algorithms for data mining
- Lays emphasis on practical applications for all the theory presented
- Follows a clear and concise style, making it easy to grasp complex concepts
- Provides case studies to bring out the applications of data mining concepts in real-life scenarios

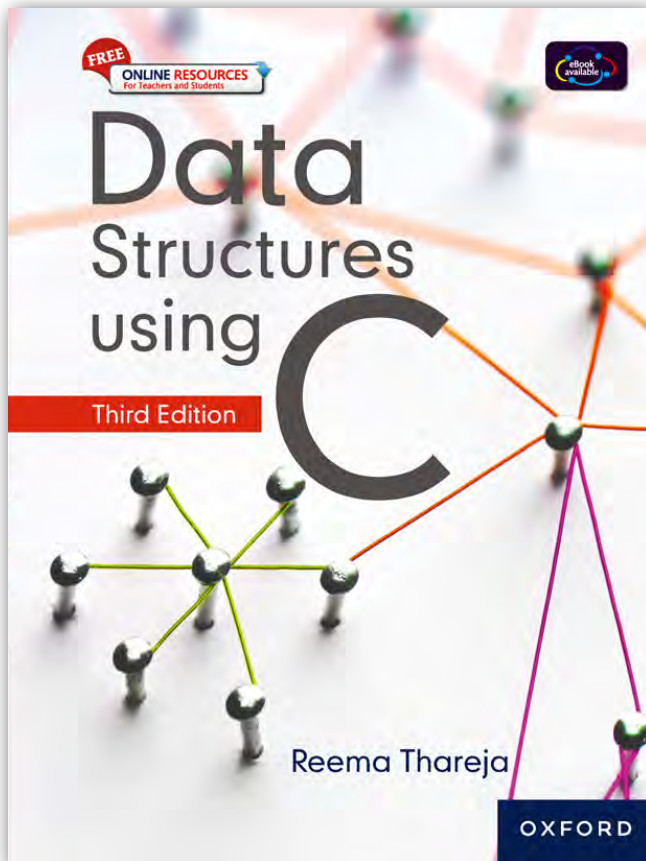
Vikram Pudi, a PhD in computer science from the Indian Institute of Science, Bangalore, is currently a faculty member at the International Institute of Information Technology, Hyderabad. Dr Pudi has published research papers in many conference proceedings and in a wide variety of journals. He has also served the IT industry.

P. Radha Krishna, a PhD from Osmania University, Hyderabad, is currently Principal Researcher at SET Labs, Infosys Technologies Limited, Hyderabad. Prior to joining Infosys, he was an Associate Professor at the Institute for Development and Research in Banking Technology (IDRBT), an Institute of the Reserve Bank of India. In a career spanning over fifteen years, Dr Radha Krishna has also been associated with various IT advisory committees. He has authored four books and has more than fifty refereed publications.

eISBN: 9780190993276



TOC list



Print ISBN: 9789354977190

Third Edition

Data Structures using C

This third edition of *Data Structures using C* is a comprehensive textbook for undergraduate engineering students of computer science as well as postgraduate students of computer applications to understand the fundamental concepts of data structures and their implementation in C programming language. The book covers all the essential topics of data structures, including arrays, linked lists, stacks, queues, trees, and graphs, providing readers with a thorough understanding of each concept's strengths and limitations. With clear explanations and easy-to-follow code examples, this book is perfect for students and professionals seeking a solid foundation in data structures and their applications.

The book utilizes a systematic approach wherein the design of each of the data structures is followed by algorithms of different operations that can be performed on them, and the analysis of these algorithms in terms of their running times.

Key Features

- Provides a brush-up of C basics before delving into the analysis of data structures
- Integrates theoretical aspects of data structures with practical implementation of algorithms using tested C programs
- Provides analysis of all major algorithms in terms of their running times
- Makes use of numerous algorithms, programs, and illustrations to explain the concepts
- Provides numerous end-chapter exercises that vary widely in type and difficulty

New to the Third Edition

- Sections on best practices to be followed while writing a C program, need and selection of a data structure
- Updated chapters to demonstrate real-world applications of data structures
- Appendices on code optimization techniques and case studies
- Practical implementation of the algorithms using tested C programs
- Objective type questions to enhance the analytical ability of the students

Praise for the Book

The approach towards explaining the concept is good. As a data structures book it has been framed well.
 - Harish G. (Dr. Ambedkar Institute of Technology, Bengaluru)

The theoretical approach of the textbook is excellent.
 - L. L. Sandeep Kumar (GITAM University, Visakhapatnam)

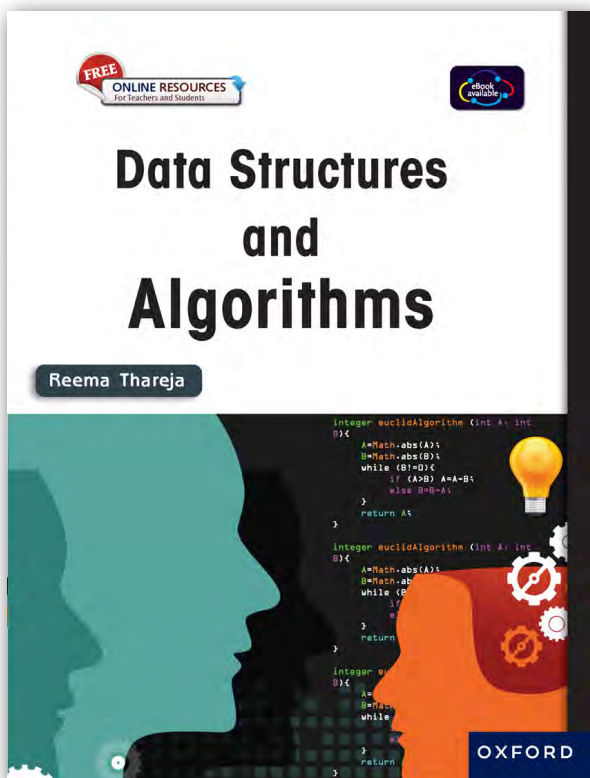
Reema Thareja is presently Assistant Professor, Department of Computer Science, Shyama Prasad Mukherji College for Women, University of Delhi.

ONLINE RESOURCES
<https://india.oup.com/orcs/9789354977190>

The following resources are available to support the faculty and students using this text:

<p>For Faculty</p> <ul style="list-style-type: none"> • Power Point presentations • Solutions manual • Projects 	<p>For Students</p> <ul style="list-style-type: none"> • Chapter-wise Programming Exercises • Additional C Programs • Interview and Quiz Questions
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eISBN: 9789354978586



Print ISBN: 9780198066231

Data Structures and Algorithms

Data Structures and Algorithms is designed for undergraduate and postgraduate students of computer science, information technology, and related fields, as well as professionals seeking to upgrade their skills. It offers a thorough exploration of data structures and algorithms, combining clear explanations with real-world examples. The content is structured to facilitate both learning and teaching, making it an invaluable resource for students and educators alike.

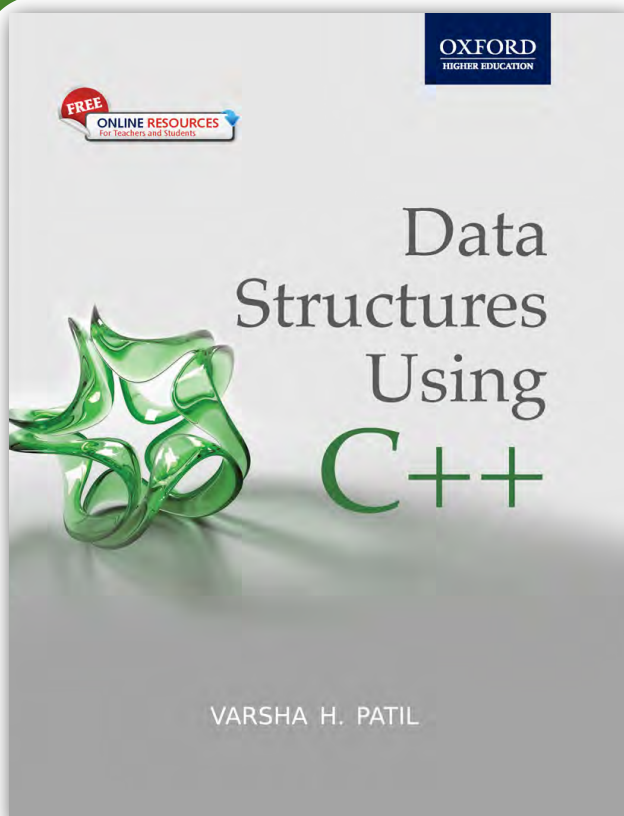
The book covers a wide range of topics, from basic data structures like arrays and linked lists to more advanced concepts such as graphs and dynamic programming. Each chapter is designed to build on the previous ones, gradually increasing in complexity and depth. This approach ensures that readers develop a solid understanding of the fundamentals before moving on to more challenging material. Additionally, the book includes numerous examples, illustrations, and exercises to reinforce learning and provide practical experience.

Special Features of the Book

- Covers both fundamental and advanced topics, providing a complete guide to data structures and algorithms.
- Explains concepts in a clear and concise manner, making them accessible to readers with varying levels of experience.
- Includes numerous examples and illustrations to help readers understand how data structures and algorithms are applied in real-world scenarios.
- Contains detailed analysis of algorithm efficiency, helping readers understand the trade-offs involved in different approaches.
- Covers both classical and contemporary data structures and algorithms, ensuring that readers are up-to-date with the latest developments in the field.

Reema Thareja is Assistant Professor, School of Open Learning, University of Delhi.

eISBN: 9780199094370



Print ISBN: 9780198066231

Data Structures Using C++

Data Structures Using C++ is designed to serve as a textbook for undergraduate engineering students of computer science and information technology as well as postgraduate students of computer applications. The book aims to provide a comprehensive coverage of all the topics related to data structures.

The book begins with a discussion on the fundamentals of data structures and algorithms, and moves on to the concepts of linear data structures, stacks, recursion, queues, and searching and sorting. All the elements of data structures, such as linked lists, trees, graphs, hashing, heaps, and indexing, are covered in separate chapters in detail. The chapter on files explains file management and organization using C++ and the chapter on the standard template library provides detailed coverage of entities such as containers and iterators.

Written in a simple manner with strong pedagogy including numerous multiple-choice and review questions, the book also provides programming problems at the end of every chapter.

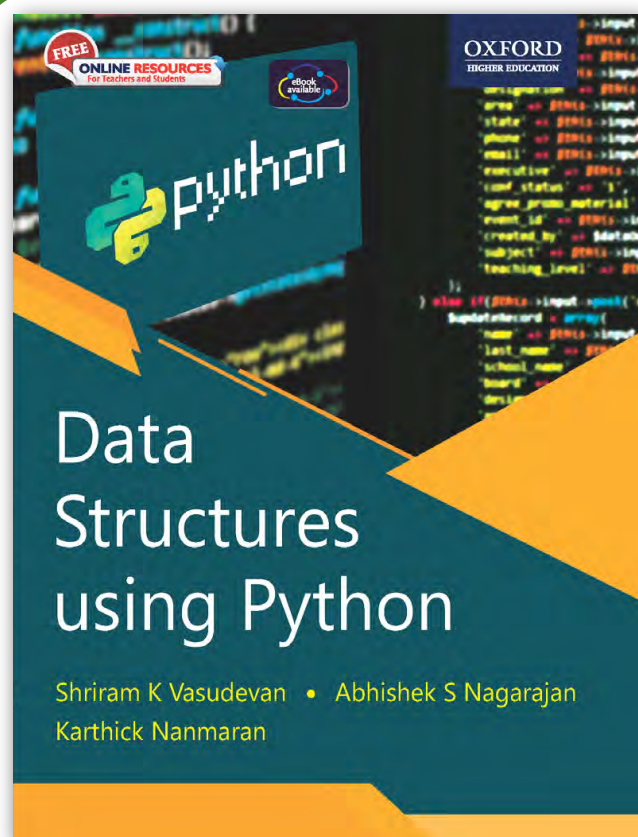
Key Features

- Provides a thorough overview of the fundamental concepts
- Includes numerous algorithms and program codes in C++ to illustrate the topics discussed
- Provides several illustrations and flowcharts to help understand the subject effectively
- Contains glossary and summary at the end of every chapter for a quick recapitulation

Varsha H. Patil is Professor, University of Pune, and Head, Computer Science & IT Engineering Departments, at Matoshri College of Engineering & Research Centre, Nashik. She is also serving as the Vice-Principal of the same institute. She has more than 20 years of teaching experience, and several research papers, published in national and international journals of repute, to her credit.

Dr Patil is a member of the Board of Studies of Computer Engineering at the University of Pune and a life member of various professional bodies such as the Indian Society for Technical Education (ISTE), the Computer Society of India (CSI), the Institute of Engineers (India) (IEI), and the Institution of Electronics and Telecommunication Engineers (IETE).

eISBN: 9780199094370



Print ISBN: 9780198086352

Data Structures using Python

Data Structures using Python provides an introduction to design, analysis, and implementation of data structures using the powerful language, Python. This book is designed for a first course on the subject. It is written for the undergraduate students of computer science, information technology, and allied disciplines.

Spread over 13 chapters and an appendix, this book begins with an overview of the concept, need, nomenclature followed by chapters on Arrays, Stacks and Queues, Linked Lists, Binary Trees, Search Trees, Priority Queues and Heaps, Hash Tables and Sets, Memory Management, and Graphs. Sorting and Searching techniques are discussed in the last two chapters of the book. Some of the important utility functions and libraries in Python are provided as an Appendix at the end.

Key Features

- Offers **Simple and Lucid explanations** for complex Data Structure concepts using analogies from real-world objects/systems
- Includes **170+ Codes** and **190+ Figures**, illustrating the concepts
- Comes with **300+ Chapter-end Exercises** including multiple-choice questions, theoretical review questions, and exploratory application exercises.
- Provides **150+ 'Food for Brain'** mid-chapter questions, picto puzzles, and mini projects, and **60+ Solved Examples**

Shriram K. Vasudevan is Principal at K. Ramakrishnan College of Technology, Samayapuram, Trichy, Tamil Nadu.

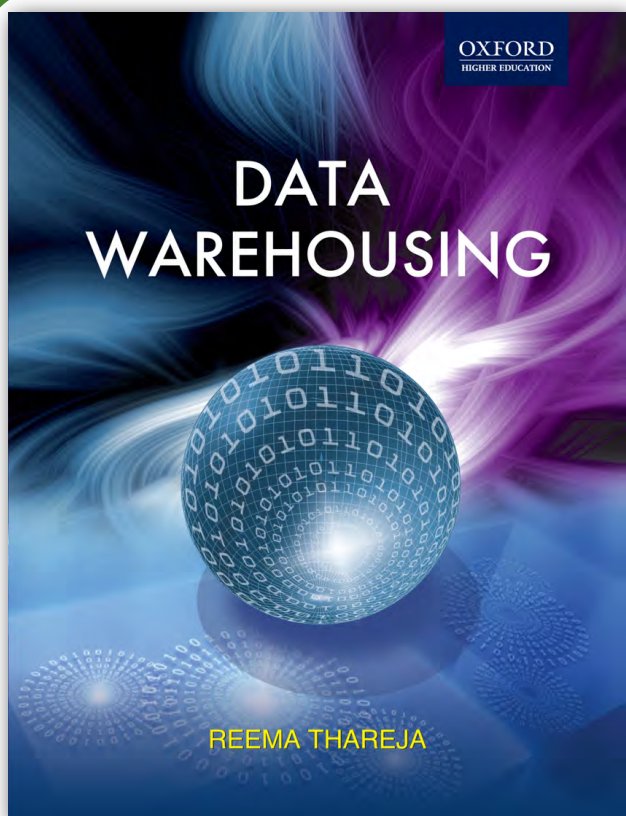
Abhishek S. Nagarajan is working as a Data Scientist in [24]7.ai. Being a multi-faceted engineering graduate, he is a programmer, research enthusiast, author, teacher and motivational speaker.

Karthick Nanmaran is Assistant Professor, Department of CSE, SRM Institute of Science and Technology, Chennai.

eISBN: 9780199083213



TOC list



DATA WAREHOUSING

Designed to serve as an introductory text for students of engineering and computer applications, *Data Warehousing* provides a thorough understanding of the fundamentals of data warehousing and imparts a sound knowledge-base to users for the creation and management of a data warehouse.

Written in a student-friendly manner, the book introduces the various features and architecture of a data warehouse followed by a detailed study of its business requirements and dimensional modelling. It goes on to discuss the components of a data warehouse and leads up to the core area of the subject by providing a thorough understanding of the building and maintenance of a data warehouse.

Delving deeper into the subject, the book furnishes a detailed discussion on planning and project management, testing and growth. It provides a broad overview of data mining and its relationship with OLAP and data warehousing technologies, finally concluding with a discussion on data warehouse solutions and the latest trends in this field.

Key Features

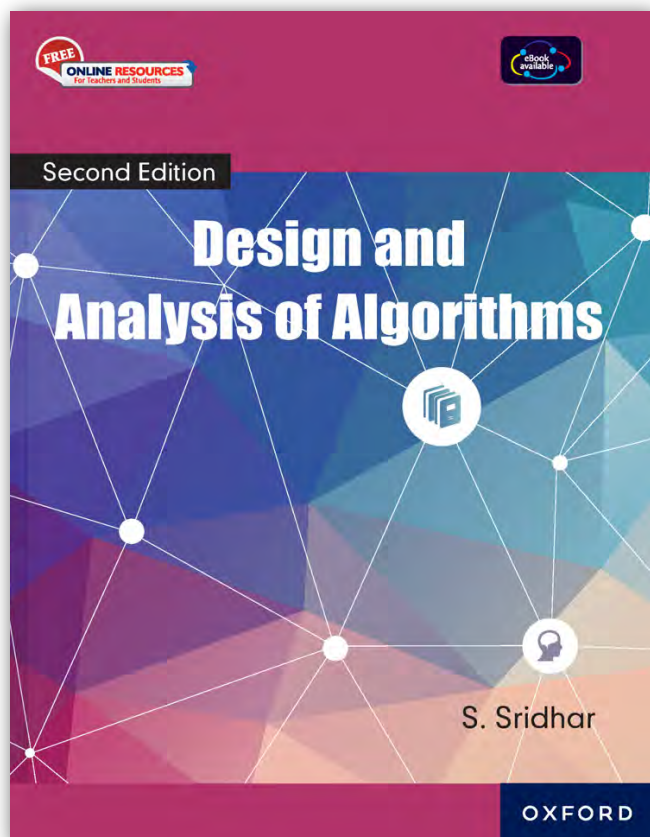
- Incorporates a step-by-step approach to designing and building a data warehouse
- Provides numerous review questions, multiple choice questions, and end-chapter exercises
- Contains a running case-study to bring out the practical aspects of building and maintaining a data warehouse
- Illustrates difficult concepts through several examples

Reema Thareja is Assistant Professor at the Department of Computer Science, Shyama Prasad Mukherji College for Women, University of Delhi. She has completed MCA (Software Engineering) and MPhil (Computer Science). She specializes in programming languages, OS, microprocessors, DBMS, multimedia, and web technologies and is currently pursuing research in the area of improving data warehouse quality.

She is the author of *Data Structures Using C, 2e*, *Programming in C, 2e*, *Computer Fundamentals and Programming in C*, *Introduction to C Programming, 2e*, *Fundamentals of Computers*, and *Object Oriented Programming with C++*, all published by OUP.

Print ISBN: 9780195699616

eISBN: 9780199083664



Design and Analysis of Algorithms

Second Edition

The second edition of *Design and Analysis of Algorithms* is an essential textbook for undergraduate and postgraduate students of computer science and information technology. This book is useful for students of other engineering branches who opt for algorithms courses, diploma students and postgraduate students of computer applications. The book is also useful for competitive examinations like GATE and coding interviews. It is specially designed to equip students with comprehensive knowledge of fundamental concepts related to algorithm design, analysis and implementation aspects of algorithms.

The book begins with exploring algorithm basics and problem-solving concepts and then introduces topics like algorithm writing, analysis of iterative and recursive algorithms. It provides detailed explanations and design techniques, including brute force, divide-and-conquer, decrease-and-conquer, greedy approach, transform-and-conquer, dynamic programming, branch-and-bound, backtracking and iterative development. Moreover, the book delves into string algorithms, data structures, linear programming, computability theory, NP-hard problems, NP-completeness, randomized algorithms, approximation algorithms and parallel algorithms, offering a well-rounded and comprehensive coverage of essential topics.

The book includes various chapter-end pedagogical features, such as point-wise summary, glossary, review questions, exercises, crosswords and additional problems, to help readers test their understanding and apply and practice the concepts learnt. Appendices on basic mathematics and proof techniques are given to aid students in revising the fundamental concepts.

Key Features

- In-depth treatment for topics such as divide and conquer, greedy approach, dynamic programming, transform-and-conquer technique, decrease-and-conquer technique, linear programming, and randomized and approximation algorithms
- Extensive discussion on computational skills, algorithm writing and analysis of iterative and recursive algorithms
- Extensive discussion on the developing and designing aspects of algorithms using minimal mathematics
- Numerous examples to assist understanding of the concepts
- Judicious presentation of algorithms using a step-wise approach throughout the text
- Historical notes on various topics and chapter-end crossword puzzles provided to engage readers and enhance their interest in the subject

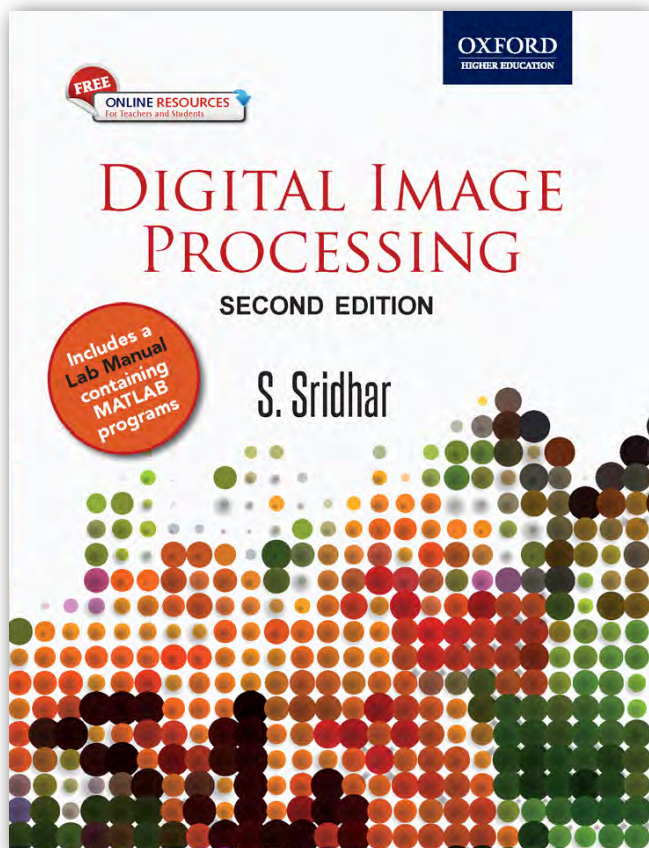
New to the Second Edition

- Laboratory manual involving Python
- Selected implementation of algorithms in Python
- Addition of topics like computational skills, Recurrence equations, B-Trees and other data structures
- Complete rewriting of selected chapters to give more clarity
- Additional problems to promote experiential learning

S. Sridhar is Professor at the Department of Information Science and Technology, College of Engineering, Guindy Campus, Anna University, Chennai.

Print ISBN: 9789354977886

eISBN: 9789354978876



Print ISBN: 9780199459353

DIGITAL IMAGE PROCESSING

SECOND EDITION

This second edition of *Digital Image Processing* is designed as a textbook for undergraduate engineering students of Computer Science, Information Technology, Electronics and Communication, and Electrical Engineering. The book provides a comprehensive coverage of the fundamental and advanced concepts of digital image processing.

Spread over 14 chapters, the book begins with an overview of image fundamentals followed by a discussion on digital imaging systems and digital image processing operations. It then discusses core topics of interest such as image transforms, image enhancement, image restoration, image compression, image segmentation, colour image processing, and the basics of image classification and image clustering. It also provides an overview of popular and emerging research domains such as role of soft computing in image processing, image registration and fusion, image security, digital watermarking and steganography, visual effects, image compositing, image encryption, computer vision, medical image processing, image data mining, image understanding, and content-based retrieval systems.

The book strikes a perfect balance between theoretical and mathematical exposition, with several numerical examples, review questions, and MATLAB programs.

Key Features

- Adopts an algorithmic approach to illustrate the concepts of image processing
- Provides simple explanations to topics such as Shannon-Fano coding, chain code, image security, digital image forensics, image segmentation, and image features
- Contains appendices that discuss the basics of MATLAB programming and ImageJ, and provides information on other public domain image processing software
- Includes a laboratory manual with examples illustrated through MATLAB exercises

New to the Second Edition

- A chapter on wavelet transforms and multiresolution analysis which focuses on the wavelet transform-based image processing as well as wavelet-based image compression
- Topics such as image security, visual effects, Radon transform, digital image forensics, and computer vision
- Pedagogical features such as crossword and word search problems
- Colour plates illustrating the effect of different image processing operations and image processing applications such as visual effects
- Additional illustrations, solved examples, and MATLAB exercises

Praise for the First Edition

The book is suitable for qualitative understanding of image processing.

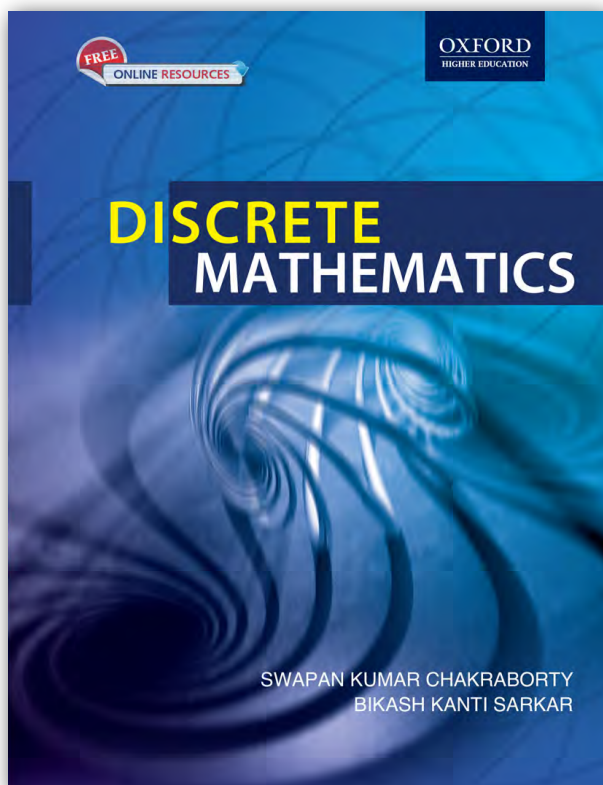
—Jignesh Sarvaiya (SVNIT, Gujarat)

Matlab codes in the book help students to verify their understanding of the image processing operations.

—Tejaswini Kar (KIIT University, Odisha)

S. Sridhar is Professor at the Department of Information Science and Technology, College of Engineering, Guindy Campus, Anna University, Chennai. A PhD in Computer Science Engineering from Anna University, he has more than 25 years of active teaching and research experience.

eISBN: 9780199099238



Print ISBN: 9780198065432

DISCRETE MATHEMATICS

Discrete Mathematics is designed as a textbook for undergraduate engineering students of computer science and postgraduate students of computer applications. The book seeks to introduce students to the mathematical concepts needed to develop logical reasoning, abstract thinking, and problem solving—important prerequisites for the study of computer science.

The book provides an exhaustive coverage of various concepts of discrete mathematics. Beginning with a detailed analysis of modern mathematical concepts such as sets, relations and functions, and matrices, the book delves into core concepts of discrete mathematics like combinatorics, mathematical logic and truth tables, groups, order relation and lattices, Boolean algebra, trees, and graphs. Special emphasis is also laid on certain advanced topics like complexity and formal languages and automata theory. Algorithms and programs have been used wherever required to illustrate the applications.

Written in a lucid style, the book helps students apply the mathematical tools to computer-related concepts.

Key Features

- Contains numerous solved examples and chapter-end exercises
- Lays emphasis on the applicability of mathematical structures to computer science
- Includes separate chapters on combinatorics and automata theory
- Includes additional topics on Boolean algebra and automata theory as well as an appendix on number theory

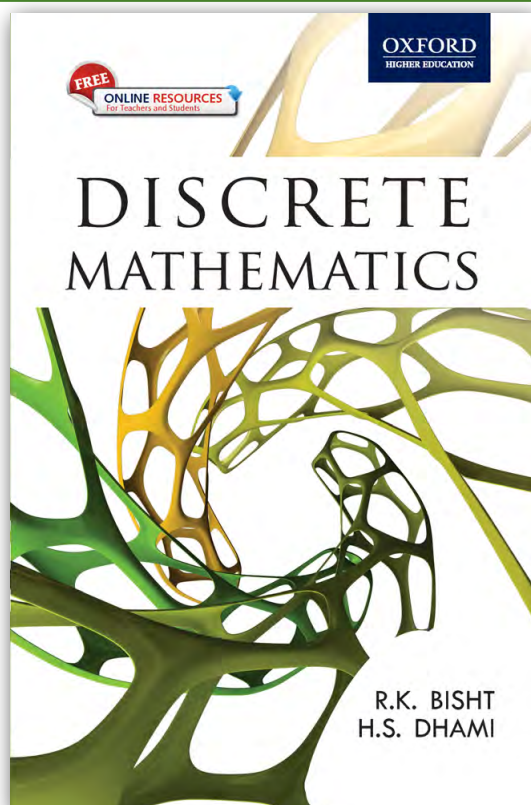
S.K. Chakraborty is currently Professor and Head at the Department of Applied Mathematics, BIT, Mesra, Ranchi. An alumnus of IIT Kharagpur, he holds a Ph D in applied mathematics from the Indian School of Mines, Dhanbad, and has about 20 years of academic experience. He has guided many research scholars and published several research papers in various journals of national and international repute. His research interest includes seismology, rock mechanics, earthquake engineering, and heat transfer. He is also a member of the Indian Society for Theoretical and Applied Mechanics, and the Indian National Science Congress Association.

B.K. Sarkar is currently Assistant Professor at the Department of Computer Science and Engineering, BIT, Mesra, Ranchi. A Ph D in computer science from Jadavpur University, he did his M Phil in computer science from Annamalai University, MCA from BESU (Howrah), and MSc (Mathematics) from IIT Kharagpur. He has more than 15 years of teaching experience, and is a life member of the Indian Society for Technical Education. His research areas include data mining, parallel computing, and evolutionary computing.

eISBN: 9780199099191



TOC list



Print ISBN: 9780199452798

DISCRETE MATHEMATICS

Discrete Mathematics is a textbook designed for the students of computer science engineering, information technology, and computer applications to help them develop the foundation of theoretical computer science.

With a detailed introduction to propositional logic, set theory, and relations, the book goes on to explore the mathematical notions of functions, integers, counting techniques, probability, discrete numeric functions and generating functions, recurrence relations, algebraic structures, and posets and lattices. The discussion ends with chapters on the theory of formal and finite automata, graph theory, and applications of discrete mathematics in various domains.

Adopting a solved problems approach to explain the concepts, the book presents numerous theorems, proofs, practice exercises, and multiple-choice questions.

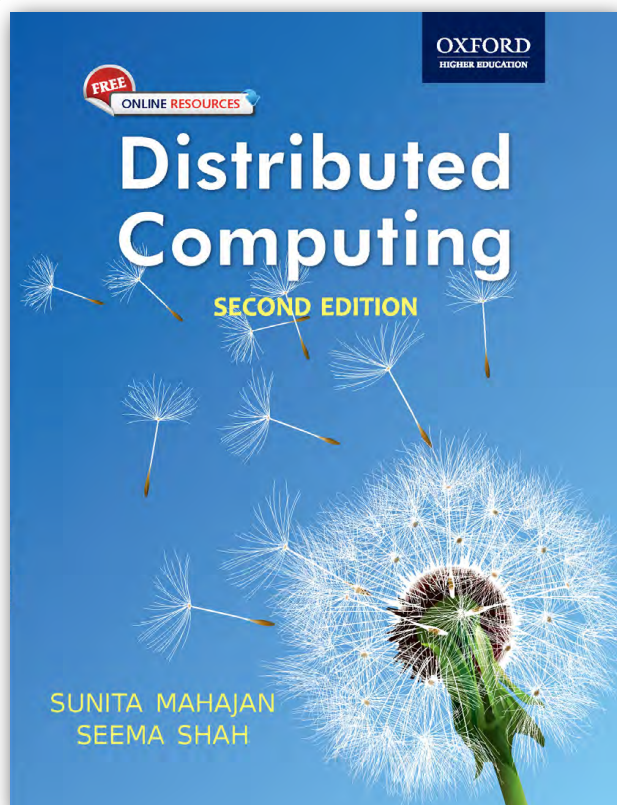
Key Features

- Presents mid-chapter boxed items, 'check your progress' sections, and chapter-end multiple-choice questions with answers
- Provides numerous solved examples and exercises grouped under different themes within every chapter
- Presents truth table values for conditional statements in context with an example
- Discusses an exclusive section on coding theory and digital logic
- Presents 'related research work' and 'application in brief' sections at the end of every chapter

R.K. Bisht is Associate Professor, Department of Computer Science & Applications, Amrapali Institute, Uttarakhand. He has qualified the National Eligibility Test (NET) conducted by CSIR and has around 8 years of teaching experience.

H.S. Dhami is Vice Chancellor, Kumaon University, Uttarakhand. He had been a professor of Mathematics and coordinator of Centre of Excellence in Mathematical Sciences, Uttarakhand. He has been selected among the 2000 outstanding intellectuals of the 21st century by the International Biographical Centre, Cambridge, England.

eISBN: 9780199090174



Print ISBN: 9780198093480

Distributed Computing SECOND EDITION

The second edition of *Distributed Computing* is specially designed for students of computer science engineering, information technology, and computer applications. It provides a clear understanding of the computing aspects of distributed systems.

The book covers the basic concepts and techniques developed in this area over the past three decades, such as the fundamentals of distributed computing, inter-process communication, synchronization, distributed system management, distributed shared memory, distributed file system, and naming. Towards the end of the book, emerging trends in high performance computing such as grid computing, Service-Oriented Architecture (SOA), and cloud computing are discussed. The book will help students and professional developers alike to understand the concepts and applications of distributed computing.

Key Features

- Presents concepts in diagrammatic and tabulated form for easy visualization wherever possible
- Includes objective and review questions at the end of each chapter, which will help students review the basic concepts discussed
- Contains several relevant case studies both inside the chapters and at the end of the book

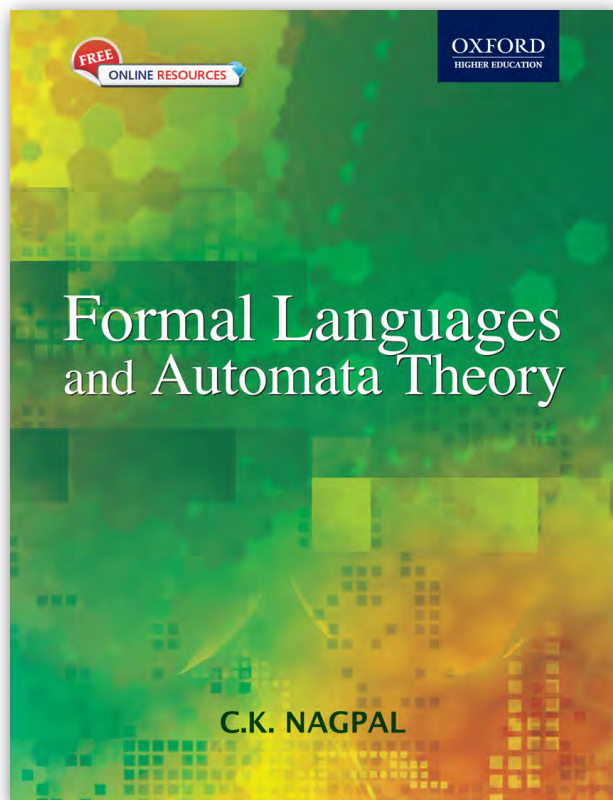
New to This Edition

- API for Internet protocol in Java
- New chapter on formal model for simulation
- Two new case studies on CORBA and Mach

Sunita Mahajan has retired as Principal from MET Institute of Computer Science, Mumbai.

Seema Shah is currently Head, Indian Institute of Gems & Jewellery (IIGJ), Mumbai.

eISBN: 9780199083671



Print ISBN: 9780198071068

Formal Languages and Automata Theory

Formal Languages and Automata Theory is designed to serve as a textbook for undergraduate and postgraduate students of engineering (computer science and information technology) and computer applications. The book provides extensive coverage of essential topics such as computability, formal languages, models of computation/automation, complexity theory, NP completeness, and decidability.

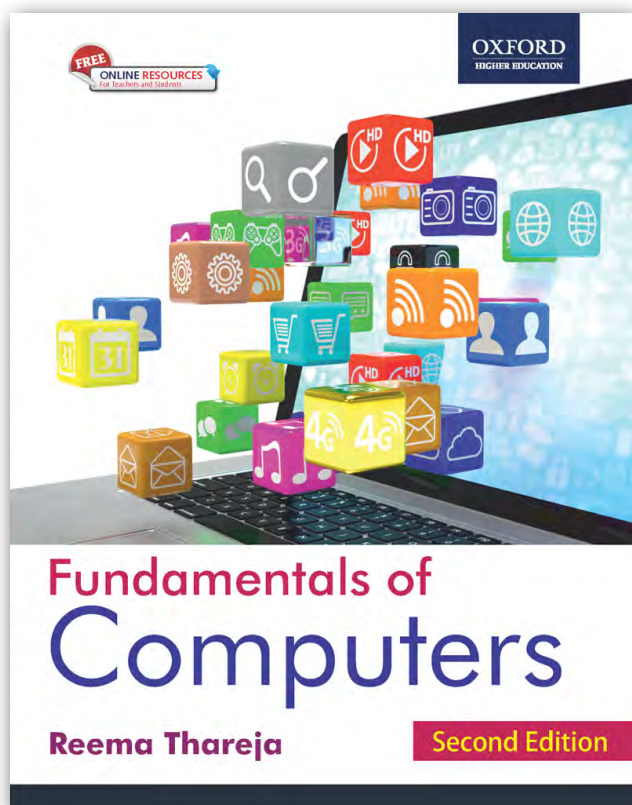
Beginning with the basic aspects of automata theory and its relevance to computer science, the book goes on to discuss the concepts of formalism and computability and discrete mathematical structures. A discussion of important topics such as regular sets and grammar, context-free languages, and various types of automata such as deterministic finite automata, nondeterministic finite automata, pushdown automata, linear-bound automata is provided. Special emphasis is laid on the design and applications of Turing machines. The book also provides an in-depth discussion on the topic of decidability and its association with recursive and recursively enumerable languages. Explicit coverage has been given to the time complexity aspect of computability and its manifestation in the form of P and NP classes.

Key Features

- Presents complex mathematical concepts in a simplified manner
- Provides several solved examples as well as supplementary examples in each chapter for better recapitulation of concepts
- Includes numerous multiple-choice questions with answers, and problems for practice at the end of each chapter
- Includes appendices on Church–Turing thesis, Godel numbering, key scientists, and important events in this field

Chander Kumar Nagpal is Professor at YMCA University of Science & Technology, Faridabad and is currently working as Principal, Echelon Institute of Technology, Faridabad on lien. A Ph D in Computer Science from Jamia Millia Islamia University, New Delhi, he has more than 20 years of teaching experience. An expert in his field, Dr Nagpal has successfully guided research and post graduate students. He has published several Research Papers in leading journals such as *IEEE Transactions on Reliability*, *Wiley STVR*, and *CSI Journal*.

eISBN: 9780199099177



Print ISBN: 9780199499274

Fundamentals of Computers Second Edition

Fundamentals of Computers has been specifically designed for those who want to learn the basic concepts of computers. It is an ideal text for self-learning concepts such as organization and architecture of a computer system, input and output devices, primary and secondary memory, as well as advanced topics including operating systems, computer networks, and databases. The book also provides step-by-step procedures to learn different applications such as MS Word, MS Excel, and MS PowerPoint.

The book will be useful for students enrolled in courses such as BSc (Computer Science), BA/BCom (Computer Applications), BSc (Hospitality & Hotel Administration), BCA, and MCA, as well as for those students who are pursuing diploma courses.

KEY FEATURES

- Provides a comprehensive coverage of computer fundamentals, focusing on both the hardware as well as software components
- Offers a detailed coverage of MS Office 2013 applications
- Includes numerous well-labelled diagrams and screenshots throughout the text
- Intersperses text with notes that highlight important concepts

NEW TO THE SECOND EDITION

- **Updated content:** operating speed and storage capacity of devices have been updated to reflect the current attributes
- **New topics:** sections on Blu-ray disks, wireless routers, tablets, digitizers, voice response systems, mobile operating systems, macOS, Python, and Windows 10
- **Lab activities:** relevant chapters are followed by lab activities which provide practical implementation of the concepts covered in the respective chapter
- **Digital support:** assessment questions and supplementary content have been made available on Oxford Areal – a smartphone application that can be downloaded from App Store (iOS) / Play Store (Android)
- **Improved pedagogy:** Numerous new real-life illustrations as well as examples

Reema Thareja is Assistant Professor at Department of Computer Science, Shyama Prasad Mukherji College for Women, University of Delhi. She has completed MCA in Software Engineering, MPhil in Computer Science, and PhD in the area of improving data warehouse quality. She has around 14 years of teaching experience and specializes in programming languages, operating systems, microprocessors, DBMS, multimedia, and web technologies.

eISBN: 9780190992415



TOC list



Internet of Things

Surya Durbha | Jyoti Joglekar

Print ISBN: 9780190121099

Internet of Things

Internet of Things is designed for students of computer science, information technology, and electronics and communication engineering to understand the interconnection and integration of the physical world with the cyber space, and to apply the same in designing and developing related IoT applications. This textbook will serve as a useful resource across all undergraduate and post-graduate programmes offering this course.

Divided into five parts and 18 chapters, the book's coverage is as follows:

Part I: Foundational Aspects

Part II: Understanding the Nuts and Bolts of IoT Hardware, Software, and Middleware

Part III: IoT Big Data Science and Analytics

Part IV: Data Management in IoT

Part V: Compelling Use Cases of IoT

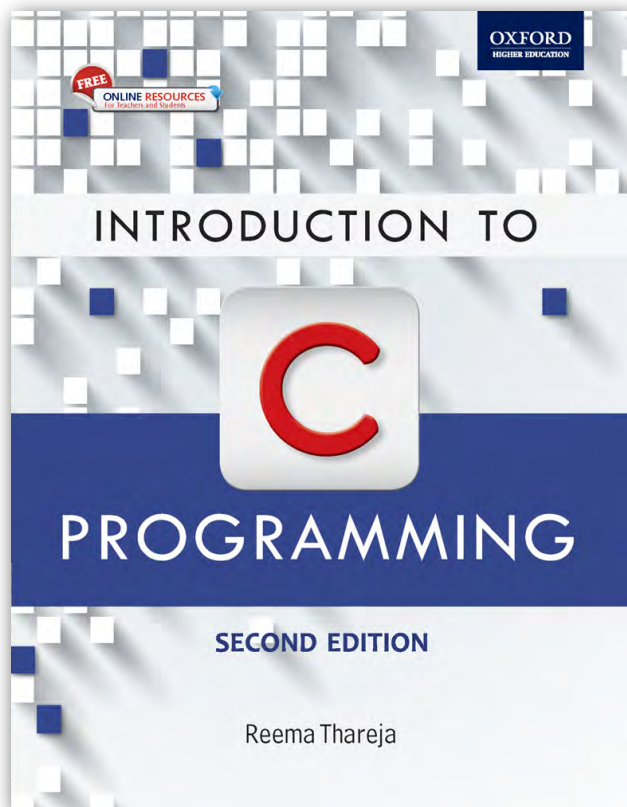
Key Features

- Approaches IoT in an application-oriented manner—connecting the foundational aspects of the subject with its relevance in real-life applications.
- Includes dedicated chapters on Business Process Management, Edge Analytics, Big Data, Embedded HPC, and Interoperability
- Ample solved exercises and illustrations in the text to aid students in self-study
- Provides programming exercises in Python and Java in the relevant chapters

Surya Durbha is Professor at CSRE, Indian Institute of Technology Bombay (IITB).

Jyoti Joglekar is Professor in the Department of Computer Engineering at K. J. Somaiya College of Engineering (KJSCE), Somaiya Vidyavihar University (SVU), Mumbai.

eISBN: 9780190992224



INTRODUCTION TO

C

PROGRAMMING

SECOND EDITION

Reema Thareja

INTRODUCTION TO C PROGRAMMING SECOND EDITION

This second edition of *Introduction to C Programming* is designed to serve as a textbook for B Tech and MCA students as well as those pursuing any basic course on C programming. The book focuses on the fundamentals of C programming to enable students write effective programs.

Beginning with an introduction to programming in general, the text delves into a complete analysis of the various constructs of C such as decision control and looping statements, functions, arrays, strings, pointers, structures and unions, file management, and pre-processor directives. It also presents a separate chapter on linked lists detailing the various kinds of linked lists and how they are used to allocate memory dynamically. The second edition also features a new section on C programming with Unix, Linux, and Ubuntu as well as a detailed discussion on algorithms and how they act as a blueprint for writing effective C programs.

A strong pedagogical approach is followed throughout the book, which includes plenty of examples, figures, programming tips, keywords, and end-chapter exercises. These features, augmented further in this new edition, will help students master the art of writing C programs.

Key Features

- Exhaustive coverage of fundamental topics with more than 200 program code examples with outputs
- Chapter on programming languages and the generations through which these languages have evolved, which gives readers an insight into computer software
- Chapter-wise case studies to enhance learning
- More than 700 objective-type questions, including fill-in-the-blanks, MCQs, and true/false questions
- Supporting annexures on topics such as sorting techniques, bit fields and slack bytes, deciphering pointer declarations, and a brief introduction to data structures

Praise for the First Edition

Concepts are neatly explained with the required programs.

– **Harish G.,**

Dr. Ambedkar Institute of Technology, Bengaluru

It's indeed a user friendly book.

– **A. Leelavathi,**

Sri Vasavi Engineering College, Tadepalligudem

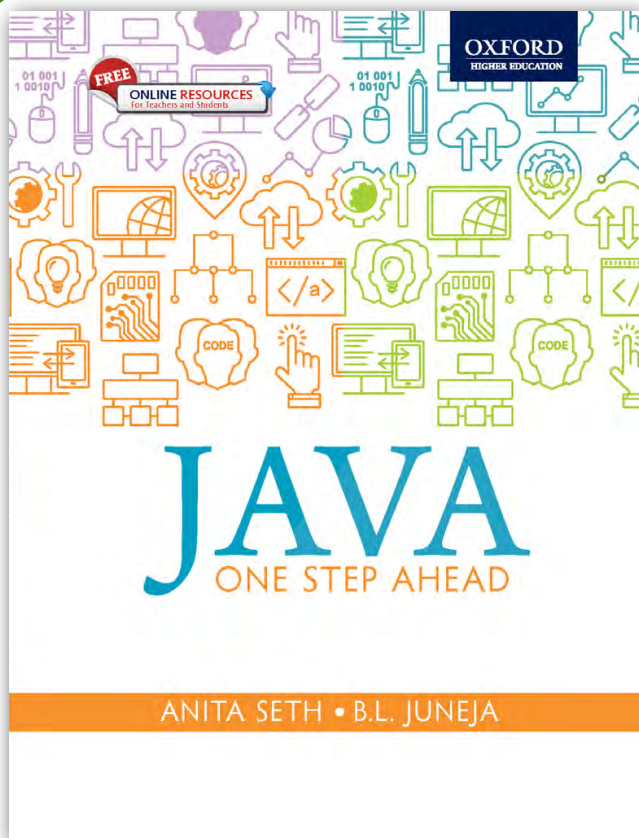
Reema Thareja is Assistant Professor at the Department of Computer Science, Shyama Prasad Mukherji College for Women, University of Delhi. She specializes in programming languages, OS, DBMS, multimedia, and web technologies and is currently pursuing research in the area of improving data warehouse quality.

She is the author of *Data Warehousing* (OUP, 2009), *Programming in C* (OUP, 2011), *Computer Fundamentals and Programming in C* (OUP, 2012), *Data Structures using C, 2e* (OUP, 2014), *Fundamentals of Computers* (OUP, 2014), and *Information Technology and its Applications in Business* (2015).

Print ISBN: 9780199452057

eISBN: 9780199099078





Print ISBN: 9780199459643

JAVA

ONE STEP AHEAD

Java—One Step Ahead is a textbook designed for undergraduate students of computer science and information technology as well as computer applications. Written by **Dr Anita Seth** from IET, DAVV, Indore and **Dr B. L. Juneja**, a former Professor at IIT Delhi, the book aims to build a strong foundation of concepts and efficient programming skills in Java.

Divided into 27 chapters, the book begins with fundamentals of OOP concepts. It goes on to discuss the evolution and development of Java programming. Further, Multithreaded programming, Strings, I/O programming, Generic programming, Collections, Applets, and Event handling are explained lucidly. This book offers a detailed coverage of GUI programming, networking, and advanced topics like JDBC, JavaBeans, etc. Frequently asked interview questions, versions of Java, and creating web pages are provided as appendices.

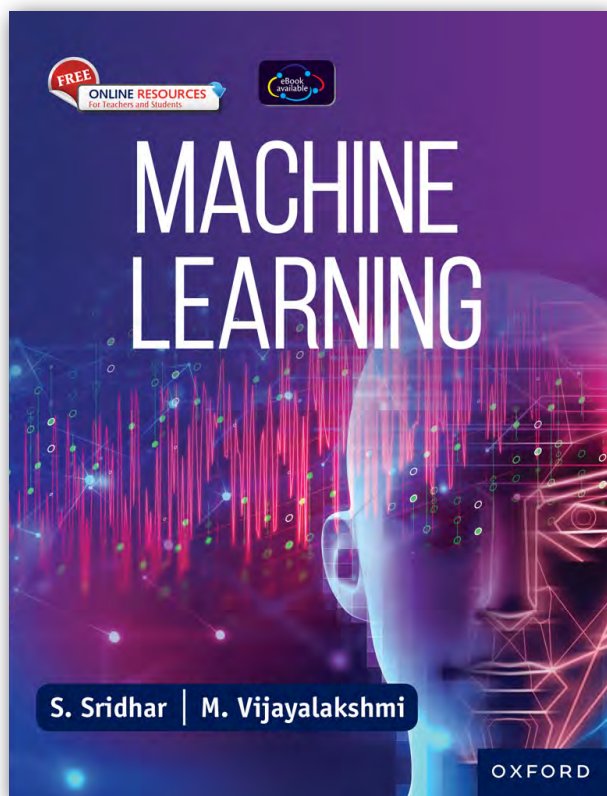
Key Features

- Detailed coverage of topics such as AWT and Swings, Event handling, Networking, Generic programming, and Collections
- Dedicated chapters on advanced topics such as JDBC, Servlets, and Java Beans
- Complete and tested programs (using JDK 8) given along with their outputs and explanations
- Notes, cartoon figures, and callouts interspersed throughout the text to explain the relevant concepts
- Separate section on common programming errors and error prevention tips provided to help readers practise good programming style
- Plenty of chapter-end exercises include MCQs, review questions, and programming exercises provided to help readers apply the learnt concepts
- Includes debugging exercises, mini projects, and case studies at the end of the chapters to help readers learn implementation of the concepts

TESTIMONIALS
 "After going through this book, I find its content and explanations to be simple and good. Example programs with explanations given under each topic, common programming errors and tips, and programming and debugging exercises are useful for students to understand the concepts easily and also practice them. The combination of theoretical concepts with cases studies are well constructed." — *Mr Bhaskar Dhanraj, Associate Professor, Department of CSE, SRM Institute of Science and Technology (Bamapuram Campus), Chennai*

"This book has covered the basics and advance concepts in Java. Each chapter of the book has written with proper illustrations to explain concepts and ends with excellent review questions. It also covers the server side programming (Servlets) used for building dynamic web application. Readers can write programs for any scenario-based interview questions." — *Dr V. Mahalingam, Professor, Department of IT, Sona College of Technology, Salem*

eISBN: 9780199098934



Print ISBN: 9780190127275

MACHINE LEARNING

This book on *Machine Learning* is designed as a textbook for undergraduate and post-graduate students of engineering. It provides a comprehensive coverage of fundamentals of machine learning.

Spread over 16 chapters, the book starts with an overview of machine learning and discusses the need for understanding data and necessary mathematics. It goes on to explain the basics of learning theory, regression analysis, decision tree, and decision rule-based classification algorithms. The book provides an introduction to Bayesian learning and probabilistic graphical models. Important topics such as support vector machines, artificial neural networks, ensemble learning, clustering algorithms, reinforcement algorithms, and genetic algorithms are discussed in depth. It ends with the latest developments in deep learning.

A perfect balance between theoretical and mathematical exposition is provided with several numerical examples, review questions, and Python programs. It will also be useful for engineering professionals and IT employees who want to learn the basics of the subject.

Key Features

- Adopts an 'Algorithmic Approach' to illustrate the concepts of machine learning in a simple language with 100+ numerical problems
- Adapts 'Minimal Mathematics Strategy' with more emphasis on understanding the basics of machine learning
- Has 'Comprehensive Coverage' of all topics that are relevant to machine learning with 100+ figures and Python codes
- Provides 'Simple Explanation' to topics such as clustering, support vector machines, genetic algorithms, artificial neural networks, ensemble learning, and deep learning
- Contains 'Appendices' that discuss the basics of Python and Python packages such as NumPy, Pandas, Scikit-learn, Matplotlib, SciPy, and Keras
- Includes a 'Laboratory Manual' with examples illustrated through Python and its packages
- Comes with 'Useful Pedagogical Features' such as Crossword and Word Search

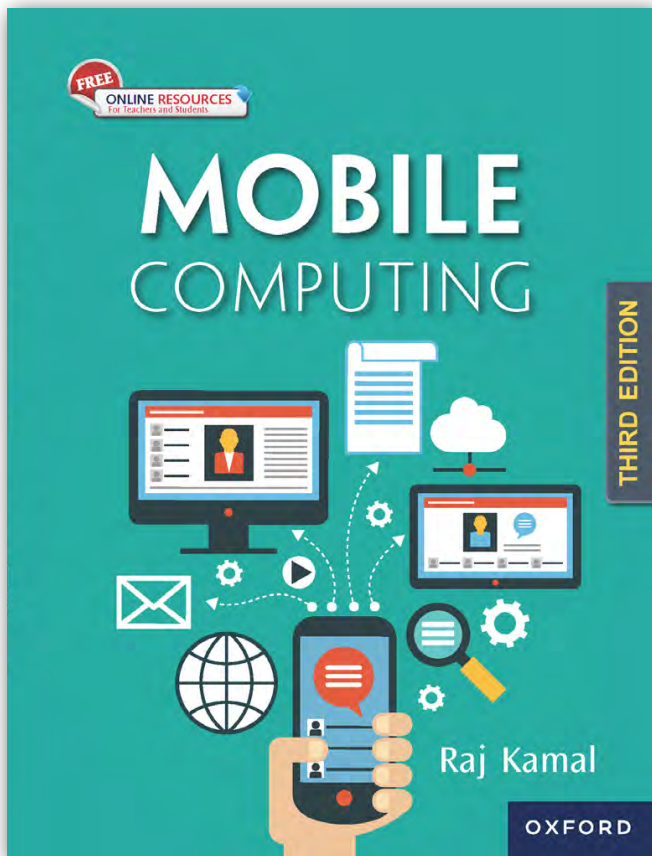
Dr S. Sridhar is Professor at the Department of Information Science and Technology, College of Engineering, Guindy Campus, Anna University, Chennai.

Dr M. Vijayalakshmi is Associate Professor at the Department of Information Science and Technology, College of Engineering, Guindy Campus, Anna University, Chennai.

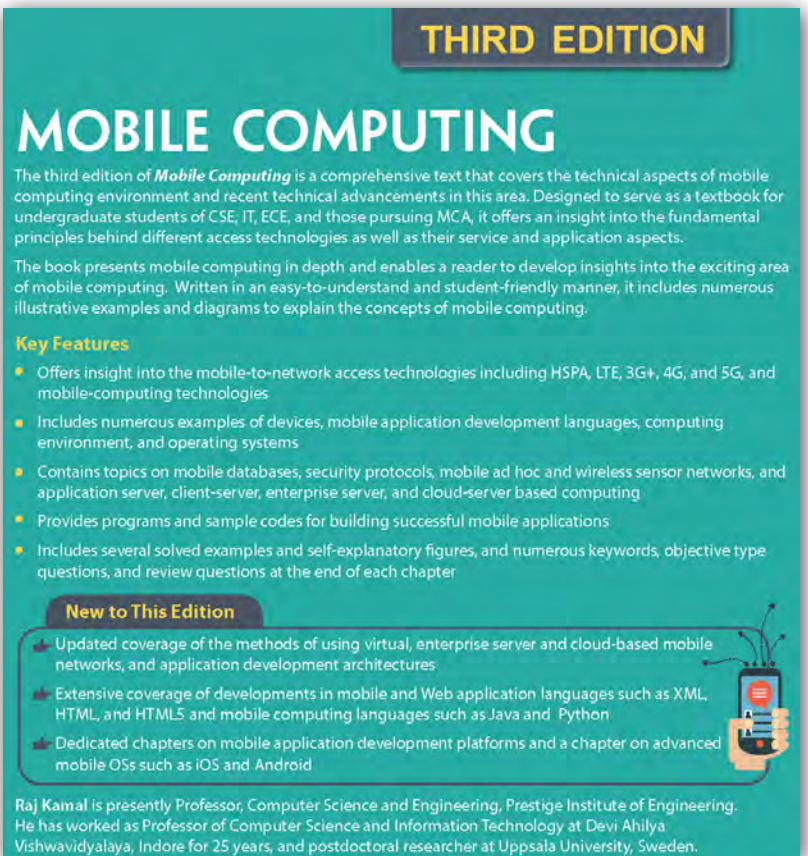
eISBN: 9789391050504



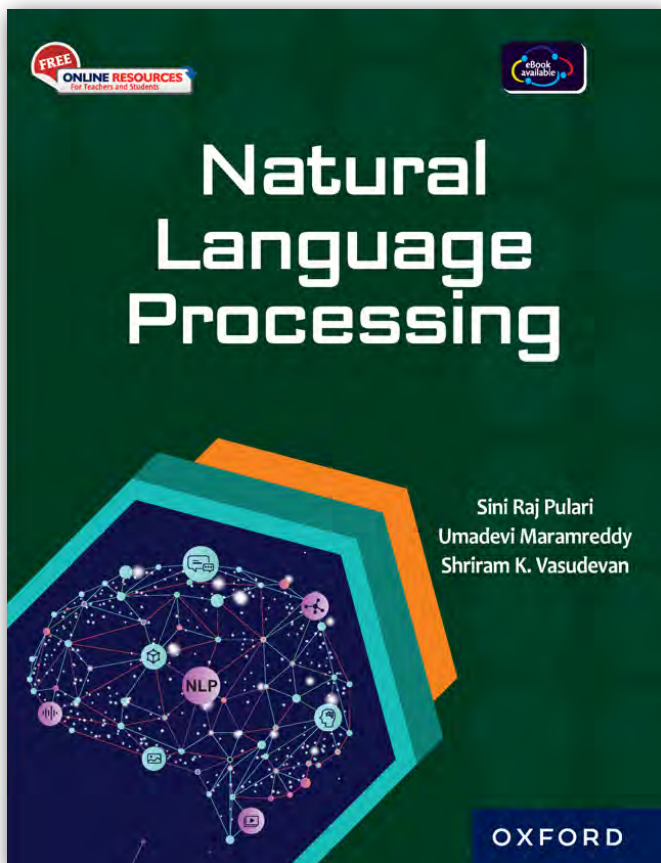
TOC list



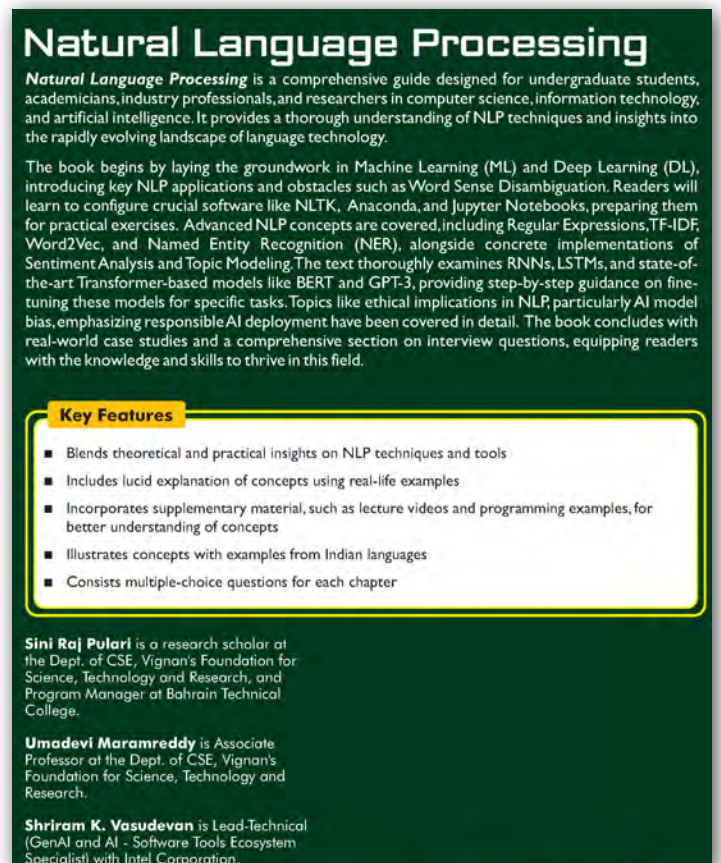
Print ISBN: 9780199455416



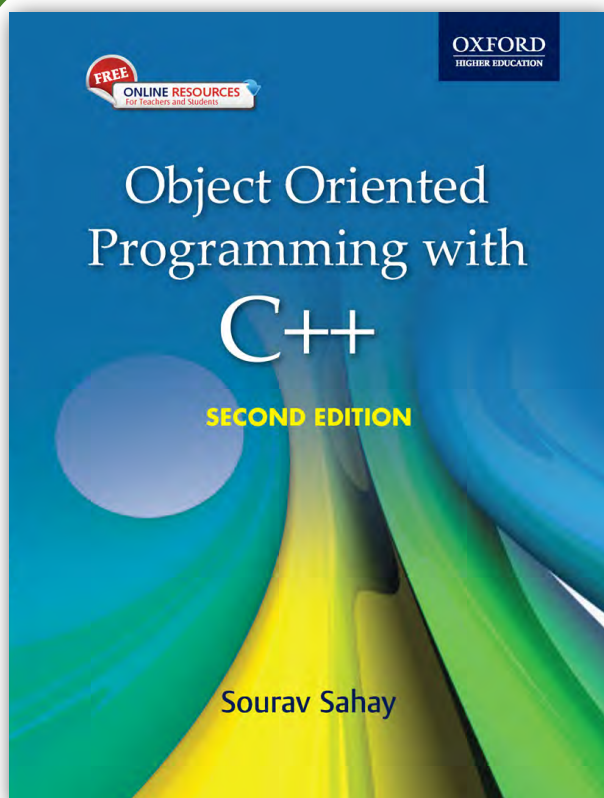
eISBN: 9780199094424



Print ISBN: 9789361036026



eISBN: 9789367251225



Print ISBN: 9780198065302

Object Oriented Programming with C++

SECOND EDITION

Designed to serve as a textbook for students pursuing undergraduate engineering courses in information technology or computer science, this second edition of *Object-Oriented Programming with C++* imparts a clear understanding of objects and the methods of modelling them in the object-oriented programming system (OOPS). The book would also be suitable for undergraduate as well as postgraduate students of computer applications.

The book begins with an explanation of the procedure-oriented programming system, the role played by structures in this system, and the reasons that led to the creation of OOPS. It then provides a systematic discussion of features such as classes, objects, dynamic memory management, constructors, destructors, inheritance, dynamic polymorphism, and operator overloading. The concepts of stream handling, templates (including the Standard Template Library), and exception handling have been covered in detail to provide more control and convenience to programmers.

New to this Second Edition

- New chapter on data structures containing new and original algorithms, especially an elegant and simple recursive algorithm for inserting nodes into trees. The explanations are elaborate and full of diagrams.
- New sections on explicit constructors, command line arguments, and re-throwing exceptions.
- Expanded glossary.

Key Features

- Plenty of solved examples with complete program listings and test cases to reinforce learning
- Review questions and program writing exercises at the end of each chapter to provide additional practice
- Appendices include a case study, comparison of C++ with C and Java, and an overview of object-oriented analysis and design
- Self-tests at the end of the book to prepare the students for examinations

Praise for the First Edition

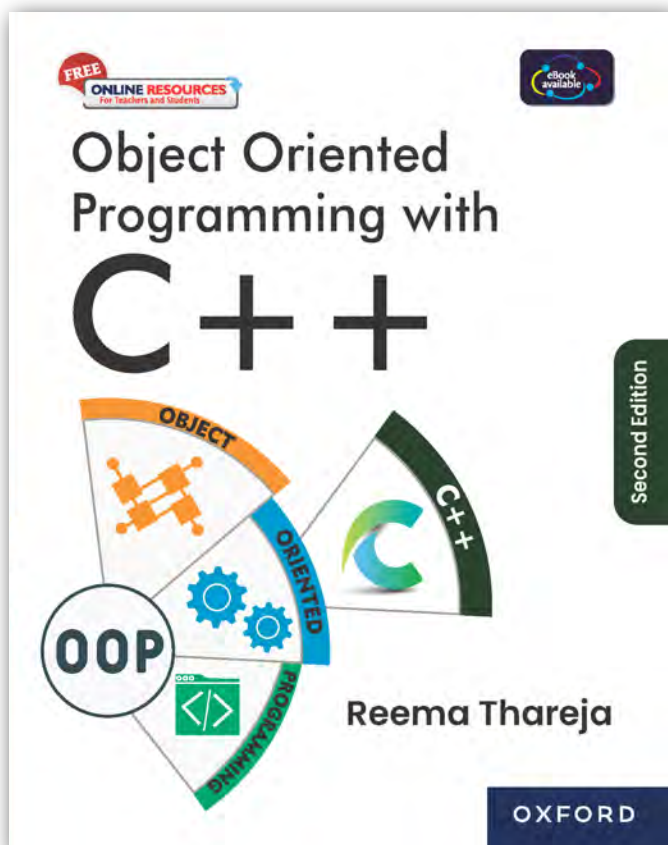
All concepts are explained in a concise way with small examples followed by a large exercise.

Professor Ajit Kumar Nayak
 Silicon Institute of Technology, BPUT

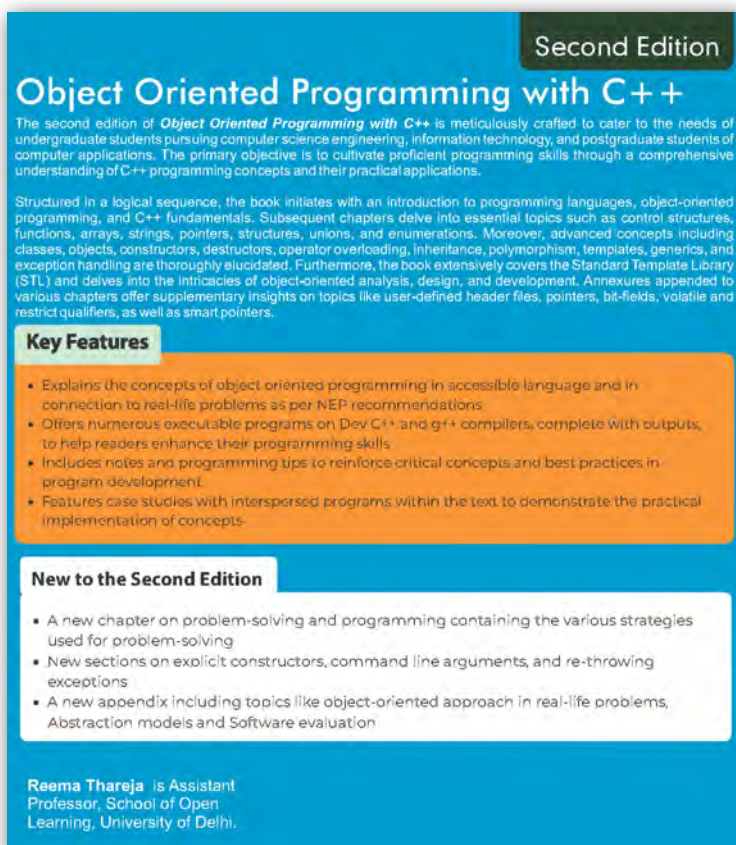
Sourav Sahay works as a Lead Consultant with Capgemini, Michigan. He has nearly 14 years of experience in the software industry.

He has taught C and C++ to the students of Calcutta University on behalf of CMC Ltd. and has also conducted a number of training programs and workshops for large corporate houses and prestigious software development firms.

eISBN: 9780199096015



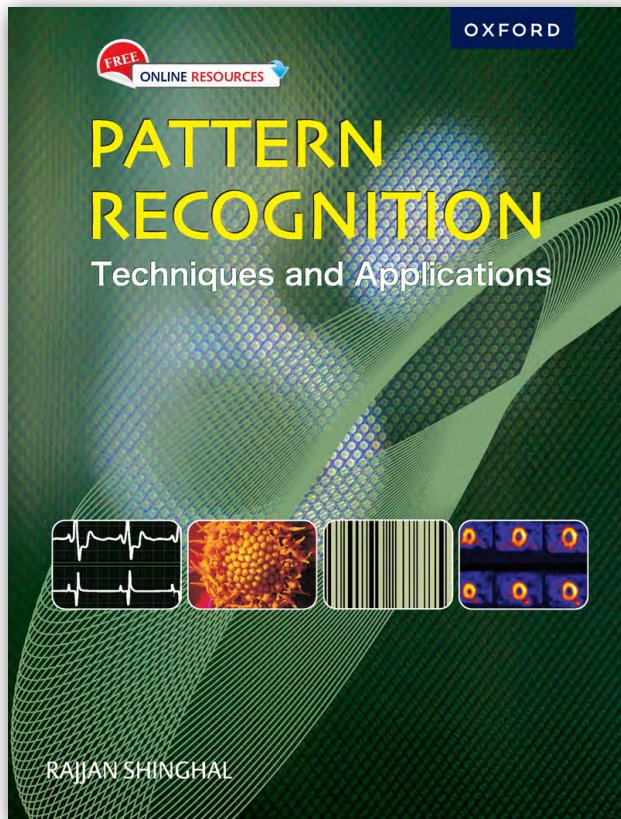
Print ISBN: 9789354979460



eISBN: 9789361039607



TOC list



PATTERN RECOGNITION

Techniques and Applications

Pattern Recognition: Techniques and Applications is a textbook designed to meet the requirements of undergraduate and postgraduate students of computer science and electrical engineering.

The book begins by introducing the concept of inductive learning and provides an exhaustive coverage of pattern recognition procedures such as those used by decision trees, evolutionary approaches, Bayes, nearest neighbour, neural nets, and linear classifiers. This is followed by discussions on topics of syntactic pattern recognition, attribute selection, and clustering. The book ends with a comparison of the results of classification of a given set of patterns using some of the different procedures discussed. The appendices present two projects: one on medical prognostication, and the other on optical character recognition.

Written in an easy-to-understand and student-friendly manner, the book provides ample practical applications and is well supported by exercises at the end of each chapter. The lucid treatment of the subject encourages self-study and instills working knowledge of pattern recognition in a student. The book would also serve as a useful reference for engineers practising in industrial and research organizations that apply pattern recognition techniques in diverse areas such as optical character recognition and medical diagnosis.

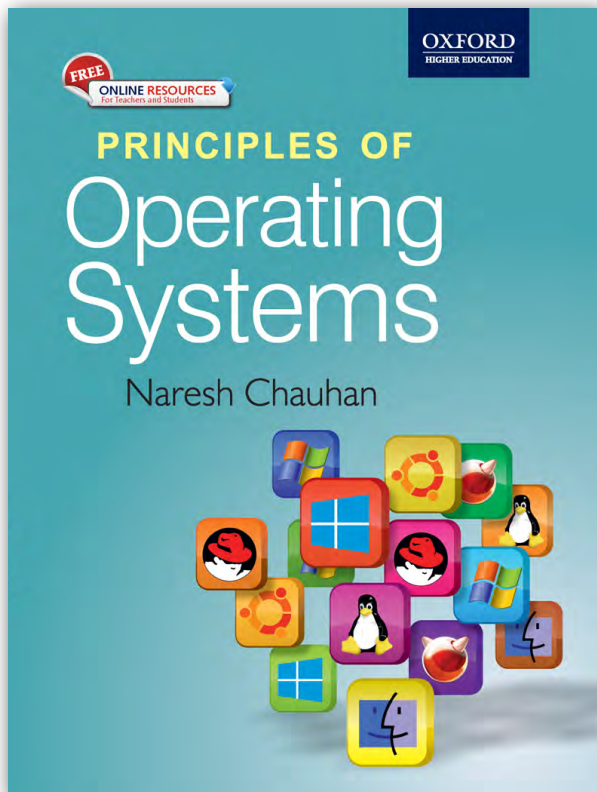
Key Features

- Includes separate chapters on decision trees, evolutionary approach, Bayes, nearest neighbour, neural nets, linear classifier, attribute selection, clustering, and syntactic pattern recognition
- Emphasizes the practical applications of all the theory presented
- Provides programming as well as non-programming exercises for each chapter
- Proposes projects for medical prognostication and optical character recognition

Rajjan Shinghal retired as Professor of computer science from Concordia University, Montreal. A Ph D in computer science from McGill University, Montreal, he has over 30 years of experience in teaching and research. He has published research papers in many conference proceedings and journals such as *Expert Systems*, *Pattern Recognition*, and the various *IEEE Transactions*. He has authored a book, *Formal Concepts in Artificial Intelligence*, published by Chapman & Hall, London, and co-published with Van Nostrand, New York. He has also co-edited a book, *Operational Expert System Applications in Canada*, published by Pergamon Press.

Print ISBN: 9780195676853

eISBN: 9780199083657



PRINCIPLES OF

Operating Systems

Principles of Operating Systems is designed as a textbook for students of computer science, engineering, and computer applications. The book aims to acquaint students with the various aspects of operating systems, such as OS architecture, process management, memory management, file management, and input/output management.

Divided into eight parts, the book tries to provide a comprehensive coverage of topics related to operating systems, beginning with OS architectures and then moving on to process scheduling, inter-process communication and synchronization, deadlocks, and multi-threading. Under the part on memory management, basic memory management and virtual memory are discussed. These are followed by chapters on file management and I/O management. Security and protection of OSs are also discussed in detail. Further, advanced OSs such as distributed, multi-processor, real-time, mobile, and multimedia OSs are presented. Android OS, one of the most popular, is discussed under mobile operating systems. The last part of the book discusses shell programming, which will help students perform the practicals for this course. The first six parts contain case studies on UNIX, Solaris, Linux, and Windows.

Key Features

- Explains how the modern OSs have been developed and discusses different types of OSs and OS architectures
- Highlights the hardware issues necessary to understand operating system concepts
- Contains dedicated chapters on specialized OSs such as distributed OSs, multiprocessor OSs, real-time OSs, mobile OSs (including Android OS), and multimedia OSs
- Covers every concept in depth and provides numerous solved examples interspersed within the text
- Provides specially designed brain teasers at the end of each chapter for the students to develop an analytical approach to problem solving
- Includes case studies of four OSs, namely, UNIX, Solaris, Linux, and Windows and two real-time OSs, VxWorks and QNX
- Contains a separate chapter on shell programming that will be helpful for operating system laboratory

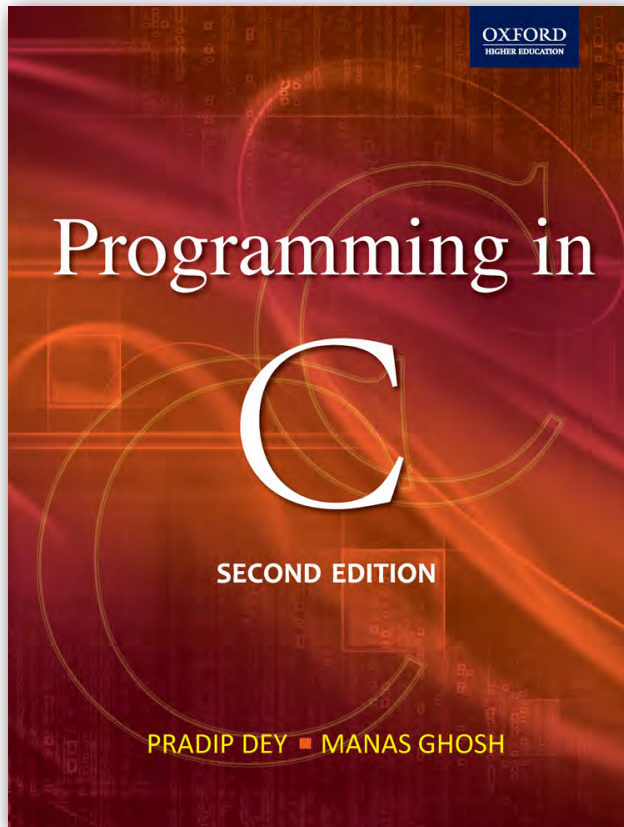
Naresh Chauhan is currently working as Professor and Chairman at the Department of Computer Engineering at YMCA University of Science and Technology, Faridabad. A PhD in Internet and Web Technology, Prof. Chauhan has a total work experience of about 22 years, including teaching. Other than teaching, he has also worked for several years in organizations such as Bharat Electronics Ltd and Motorola.

Prof. Chauhan has published/presented several research papers in both national and international journals and conferences in the area of Search Engines, Focused Web Crawlers, Test Case Prioritization, and Agile Software Estimation and Agile Testing. His key interest areas are Internet and Web Technology, Software Testing, Operating Systems, and Embedded and Real-time Systems. He is also the author of *Software Testing: Principles and Practices* [OUP, 2010].

Print ISBN: 9780198082873

eISBN: 9780199083879





Print ISBN: 9780198083528

Programming in C

SECOND EDITION

The second edition of *Programming in C* is designed to serve as an introductory text for students of engineering, computer applications, and computer science. It provides a thorough understanding of the fundamentals of C and its applications.

Beginning with the basic concepts of programming, the book gives an exhaustive coverage of arrays, strings, functions, pointers, and data structures. Separate chapters on linked lists and stacks, queues, and trees, with their implementation in C, have been provided to simplify the learning of complex concepts.

Some advanced features of C such as memory models, command-line arguments, and bitwise operators have also been included. Case studies demonstrating the use of C in solving mathematical as well as real-life problems have also been presented. This edition also highlights C99 features wherever relevant in the text.

Students will find this book an excellent companion for self-study owing to its easy-to-understand approach with plenty of programs complete with source codes, sample outputs, and test cases.

Key Features

- Illustrates widely used library functions with program codes and test cases
- Highlights the common mistakes to indicate the possible problem areas
- Highlights C99 features wherever relevant in the text
- Provides numerous review questions and programming exercises at the end of each chapter

Pradip Deo, currently a faculty member at the RCC Institute of Information Technology, Kolkata, has over 15 years of teaching experience and about 24 years of industry experience.

Manas Ghosh, also a faculty member at the RCC Institute of Information Technology, Kolkata, has over 13 years experience of teaching and development in information technology.

New to the Second Edition

- New chapter on Stacks, Queues, and Trees
- Chapter-end case studies to demonstrate how concepts can be put into practice
- Points to Note, Key Terms with definitions, Frequently Asked Questions, and Project Questions with each chapter
- Improved explanations of algorithms and codes, and new in-text examples
- Incremental problem running through Chapters 3 to 9, illustrating program code building from basics
- New sections such as variable length arrays, searching and sorting algorithms, pointer and const qualifier, and applications of linked lists

Praise for the First Edition

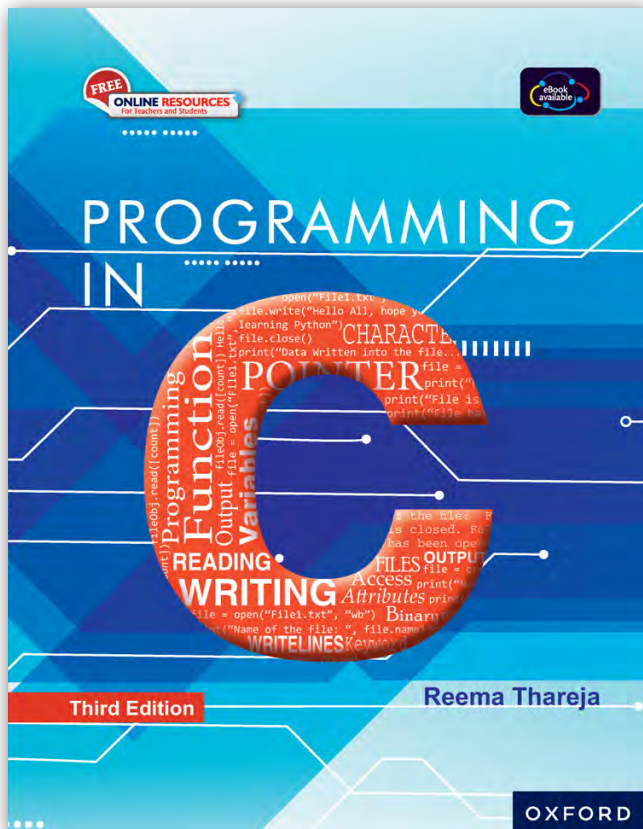
This book is a complete solution for C. The programs have been represented very well, and the problems discussed are also very good.

Prof. Dheeraj Kumar Singh
 Ajay Kumar Garg Engineering College,
 Gautam Buddh Technical University, Noida

The book has descriptive examples with output. It also provides iterative outputs.

Prof. M.P. Thiruvengadasuresh
 MPNMJ Engineering College, Erode,
 Anna University, Coimbatore

eISBN: 9780199083176



Print ISBN: 9789354979453

PROGRAMMING IN C

Third Edition

This third edition of *Programming in C* is designed for undergraduate students of engineering, computer applications, and computer science. It provides a comprehensive coverage of the fundamental concepts of C programming in solving real-world problems.

The book starts with an introduction to programming and problem solving and then delves into a detailed introduction to C programming. The key topics include iterative and decision-control statements, functions, arrays, strings, pointers, structures and unions, file management, and pre-processor directives. It deals separately with the fundamental concepts of various data structures such as linked lists, stacks, queues, trees, and graphs. The book provides numerous case studies linked to the concepts explained in the text.

The book is thoughtfully augmented with illustrative examples, insightful figures, detailed algorithms, invaluable programming insights, and skill-refining exercises. In essence, it emerges as the ultimate student companion, equipping them to attain mastery in crafting efficient and eloquent C programs.

Key Features

- Employs a very lucid style of presentation which makes the concepts easy to understand
- Provides more than 200 programming examples with outputs to illustrate the concepts
- Includes case studies after selected chapters to help readers develop a practical understanding of the concepts learnt
- Provides numerous chapter-end exercises to test the understanding of the theory

New to the Third Edition

- Chapter 1 completely rewritten to discuss the various strategies used for problem solving
- An annexure on code optimization techniques and case studies
- Practical implementation of the algorithms using tested C programs

Praise for the First Edition

Concepts are neatly explained with the required programs.

– Harish G., Dr Ambedkar Institute of Technology, Bengaluru

It's indeed a user-friendly book.

– A. Leelavathi, Sri Vasavi Engineering College, Tadepalligudem

Reema Thareja is Assistant Professor at Department of Computer Science, Shyama Prasad Mukherji College for Women, University of Delhi.

eISBN: 9789354979965



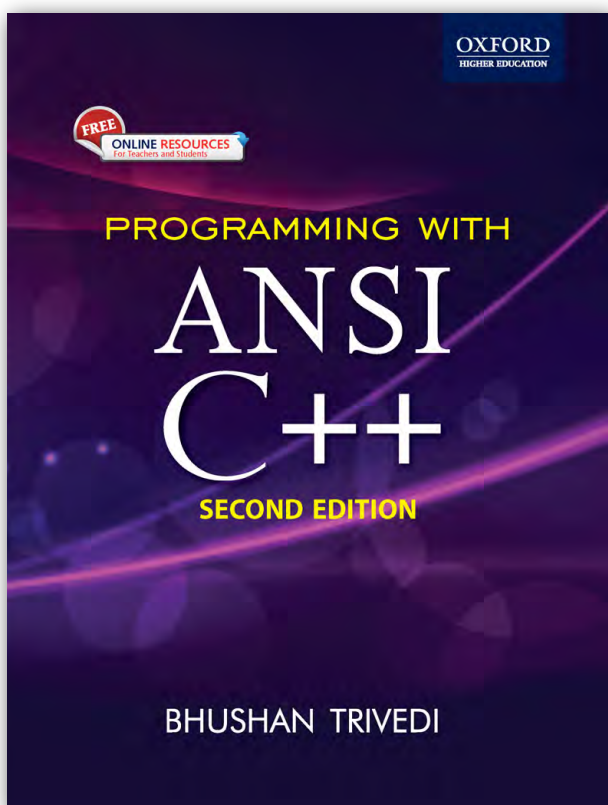
TOC list



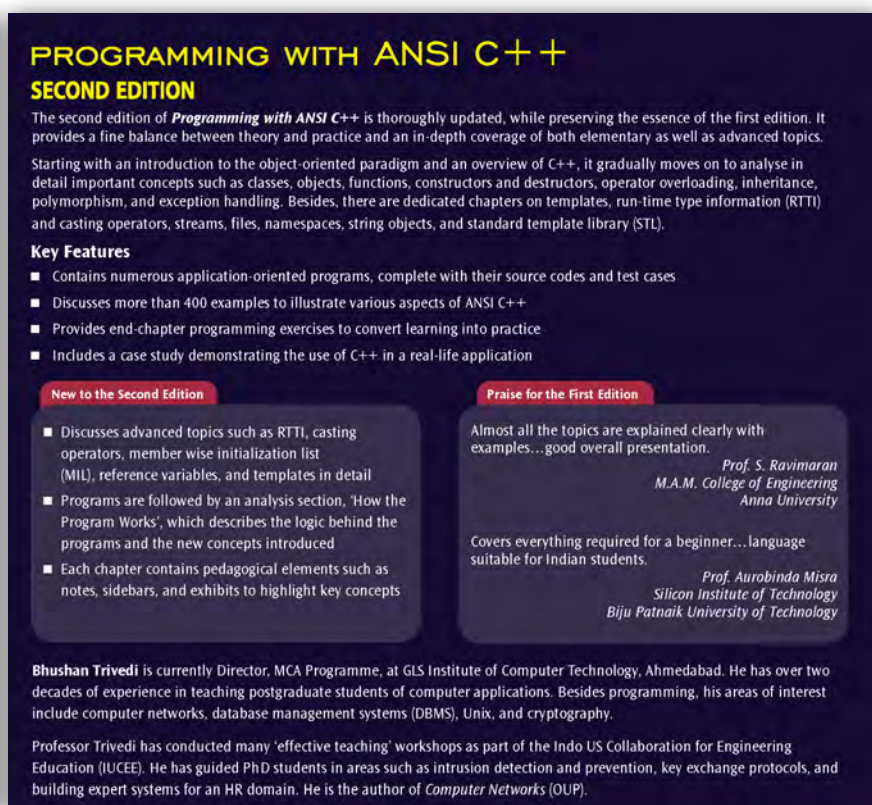
Print ISBN: 9780199484140



eISBN: 9780199094349

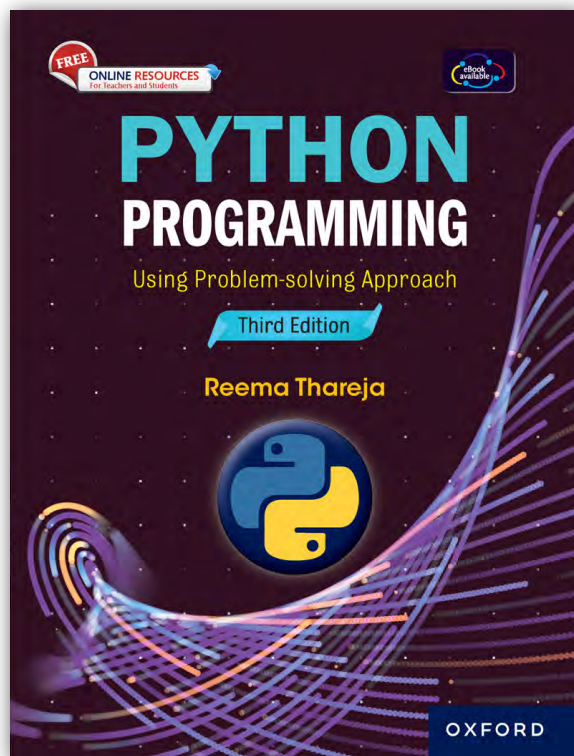


Print ISBN: 9780198083962



eISBN: 9780199083794





Print ISBN: 9789367257654

PYTHON PROGRAMMING

Using Problem-solving Approach

Third Edition

The Third edition of *Python Programming Using Problem-solving Approach* is designed to serve as a comprehensive textbook for undergraduate and postgraduate students of computer science, information technology, and other programming streams. It is also an invaluable resource for professionals who wish to learn data structures and algorithms to enhance their skills and stay competitive in the ever-evolving tech industry.

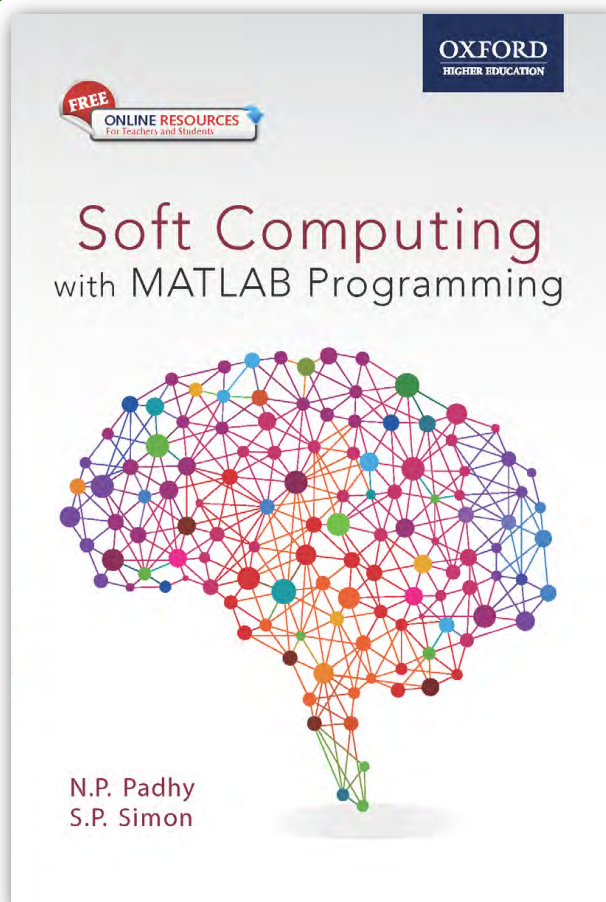
The book provides a thorough introduction to Python programming, starting with the basics and gradually progressing to more advanced topics. Each chapter is structured to build on the previous one, ensuring a smooth learning curve for readers. The problem-solving approach adopted in this book encourages readers to think critically and develop efficient solutions to programming challenges.

Salient Features of the Book

- ◆ **Problem-solving Approach:** Each chapter includes real-world examples and practical exercises that encourage readers to apply their knowledge and develop problem-solving skills.
- ◆ **Clear and Concise Explanations:** Concepts are explained in a clear and concise manner, enabling readers to grasp even the most complex topics.
- ◆ **Extensive Examples:** Numerous examples are provided throughout the book to illustrate key concepts and demonstrate best practices in Python programming.
- ◆ **Hands-on Exercises:** Each chapter includes a variety of exercises, ranging from simple coding tasks to complex programming challenges, to reinforce learning and build practical skills.
- ◆ **Visual Aids:** Diagrams and illustrations are used to explain concepts and algorithms, making it easier for readers to understand and retain information.
- ◆ **Case Studies:** Real-world case studies are included to demonstrate the practical applications of Python programming and problem-solving techniques.

Reema Thareja is presently Assistant Professor, School of Open Learning, University of Delhi.

eISBN: 9789367256442



Print ISBN: 9780199455423

Soft Computing with MATLAB Programming

Soft Computing with MATLAB Programming is a textbook designed for undergraduate students of computer science, information technology, electrical and electronics, and electronics and communication engineering as well as those pursuing an MCA degree. It aims to familiarize students with soft computing fundamentals and approaches to solving real-world problems.

It provides a comprehensive coverage of all the major constituents of soft computing, viz., expert systems, neural networks, fuzzy logic, and evolutionary computation including evolutionary algorithms, genetic algorithms, and swarm intelligence techniques. Most of the swarm-based algorithms have been implemented and explained in an easy step-by-step approach using MATLAB programming.

The book offers exhaustive coverage on artificial neural networks (ANNs) and fuzzy logic. Beginning with an overview of Soft Computing, it discusses in detail the ANN tracking in all the three generations of neural networks and their developments. These are followed by a detailed discussion on fuzzy logic and its features and applications, and genetic algorithm operators such as crossover and mutation with suitable examples and illustrations.

Key Features

- ◆ Discusses swarm intelligent systems with their fundamental concepts of exploration and exploitation
- ◆ Elaborates on Artificial Bee Colony algorithm and Cuckoo Search algorithm with suitable applications
- ◆ Provides more than 25 MATLAB programs with step-by-step comments and 75 solved

N.P. Padhy is currently Director of Malaviya National Institute of Technology, Jaipur. His professional interests include the application of expert systems, fuzzy logic, neural networks, genetic algorithms, evolutionary programming, and swarm intelligence to solve engineering problems. He has published over 200 research papers in various national and international conferences and journals. He is the author of *Artificial Intelligence and Intelligent Systems* (OUP 2005).

S.P. Simon is currently Assistant Professor, Department of Electrical and Electronics Engineering, National Institute of Technology, Tiruchirappalli. He has published nearly 50 research papers in various national and international conferences and journals.

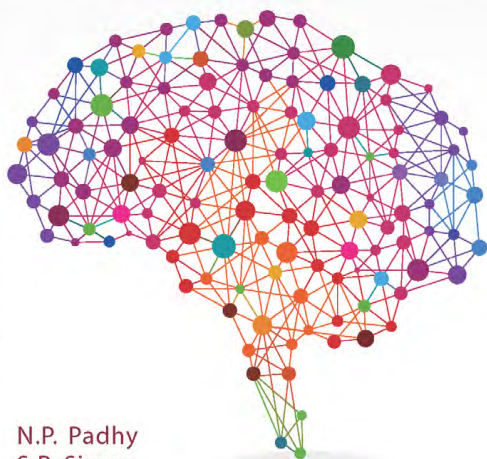
eISBN: 9780199099115



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Soft Computing with MATLAB Programming



N.P. Padhy
S.P. Simon

Soft Computing with MATLAB Programming

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S.P. Simon is currently Assistant Professor, Department of Electrical and Electronics Engineering, National Institute of Technology, Tiruchirappalli. He has published nearly 50 research papers in various national and international conferences and journals.

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OXFORD
HIGHER EDUCATION

SOFTWARE Engineering

Concepts and Applications

SUBHAJIT DATTA

SOFTWARE Engineering

Concepts and Applications

Software Engineering: Concepts and Applications bridges the critical gap between software engineering as taught in the classroom and as practised in the real world. Primarily designed as a book for students of software engineering, it offers key insights for succeeding as professional software engineers.

In its five logical parts, the book covers important topics related to understanding the realm of software engineering, planning and managing software development, making software, testing, maintaining, and modifying software systems, and the latest trends of software development. Each of the 23 chapters starts with a motivation to engage the readers' interest and ends with thought-provoking exercises to test their understanding. Many of the chapters have case studies for highlighting the application of significant ideas in real-world scenarios. Additionally, a whole chapter is devoted to an extended case study for illustrating the development of a software system, from conception to code. The book's easy and absorbing narrative draws upon the author's varied experience in professional software engineering: as a software engineer, researcher, author, and teacher.

Software Engineering: Concepts and Applications inspires the readers to join the exciting and challenging journey of professional software development.

Key Features

- Discusses the theory of software engineering in the context of its practice
- Covers topics best suited to readers with limited or no prior exposure to software engineering
- Presents background information in the form of exhibits for many of the topics
- Includes worked-out examples, review questions, reflective questions, numerical problems, case studies, and programming examples to aid self-evaluation
- Keeps the readers updated with new developments in the field through blogs and other online social media (www.dattas.net)

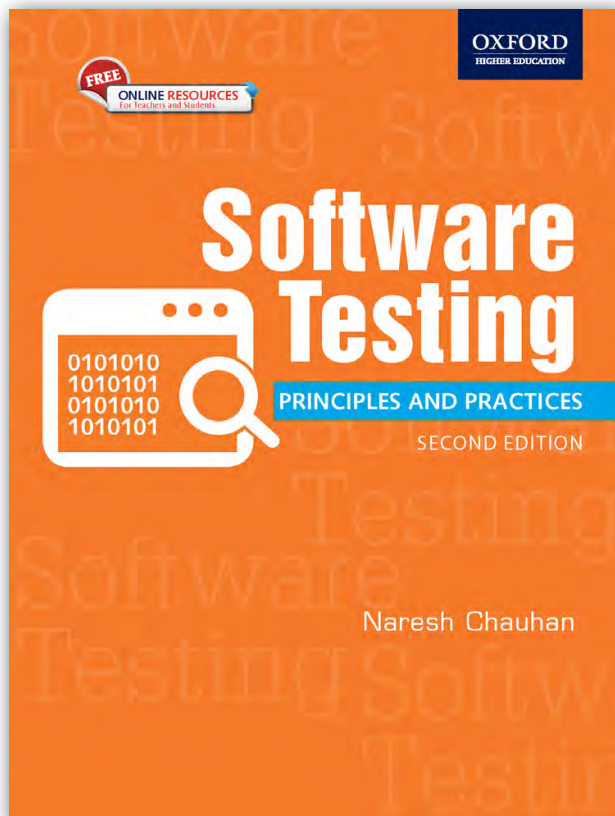
Subhajit Datta is currently engaged in software engineering research at a leading corporate research laboratory. He has more than 10 years of experience in software design, development, and research at front-line organizations. Dr Datta received a Ph.D in computer science from the Florida State University (FSU). While at FSU, he designed and delivered courses on Internet technologies and Java programming in classroom and distant learning programmes. He serves as a visiting professor at the International Institute of Information Technology, Bangalore (IIIT-B), and as a mentor for student research projects at the Symbiosis Centre for Information Technology, Pune (SCIT).

Dr Datta has several research publications to his credit, and he is the author of the book, *Metrics-Driven Enterprise Software Development*. He is certified in Rational Unified Process (RUP) and object-oriented analysis and design with the Unified Modelling Language (UML).

Print ISBN: 9780195696561

eISBN: 9780199085040





Print ISBN: 9780199465873

Software Testing

SECOND EDITION

This second edition of **Software Testing** serves as a textbook for students of computer science, information technology, and computer applications. The book focuses on software testing, not only as a phase of software development life cycle (SDLC), but also as a complete process to fulfil the demands of quality software.

Beginning with an introduction to software testing terminology and methodology, and verification and validation activities, the book provides an exhaustive coverage of testing techniques including dynamic and static testing, various validation activities, and regression testing. The book then delves into the various stages of the testing process life cycle such as test process management, testing metrics, efficient test suite management, debugging, and quality management.

The book covers ready-to-use checklists that can be used at the time of verification of software and extends to cover a case study on Income Tax Calculator describing all the major software testing techniques and concepts in a practical manner, thus making this book a valuable reference for testing professionals as well.

Key Features

- Advocates the notion of effective and systematic software testing in place of exhaustive testing
- Provides a comprehensive coverage of software testing techniques through a large number of test cases and diagrams
- Covers testing techniques for two specialized environments: object-oriented software and web-based software
- Includes a large number of examples, multiple-choice questions, and unsolved problems for practice

New to the Second Edition

- A chapter on Agile Testing focusing on the agile testing methodology which has gained importance in recent years
- Strengthened coverage of dynamic testing techniques, with the inclusion of robust worst-case testing method, orthogonal array testing strategy, predicate coverage, and path sensitization
- Test case prioritization techniques based on data flow, module-coupling slice, and program structure analysis
- Testing techniques such as reliability testing and system testing based on use-cases
- Additional examples on black-box and white-box testing techniques
- An appendix (available online) which provides an overview of the working environment and components of CAST tools such as JMeter, JUnit, and Selenium

Praise for the First Edition

Systematic and detailed coverage of software testing concepts and its processes. The best book on the subject.

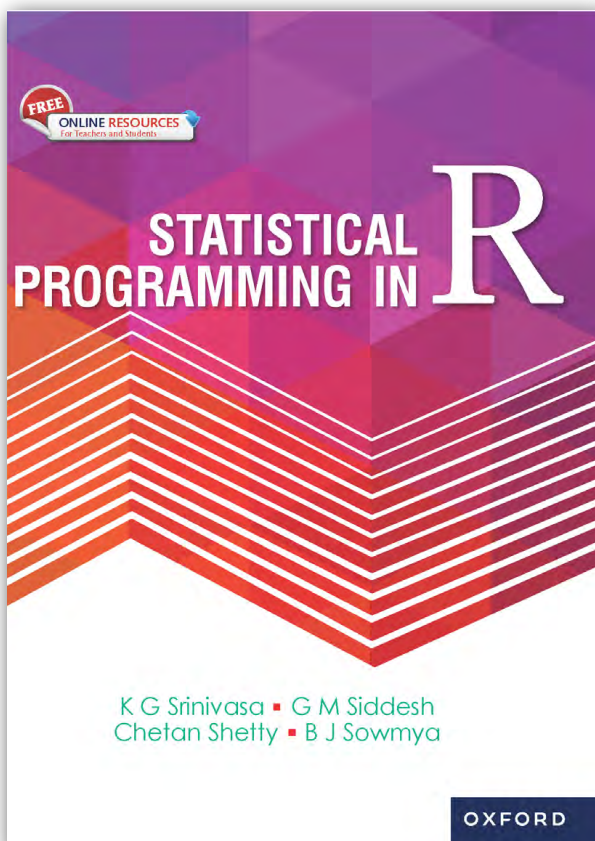
—K. Anil Kumar, Indore Institute of Science and Technology

A very good book for testing methodology.

—Danish Ali Khan, NIT, Jamshedpur

Naresh Chauhan is currently Professor, Department of Computer Engineering, YMCA University of Science & Technology, Faridabad. A PhD in Internet and Web Technology, he has about 19 years of experience, teaching both undergraduate and postgraduate students.

eISBN: 9780199094288



Print ISBN: 9780199480357

STATISTICAL PROGRAMMING IN R

Statistical Programming in R is a textbook designed to explain the theory, syntax, and scripting of this powerful language that helps build robust statistical models, analyse huge data with ease, and visualize and draw meaningful inferences. This book is designed for the first course on the subject taught for the students of undergraduate engineering in computer science and computer applications. It would also be useful for people who are beginners in data science and statistical analysis and those who want to begin with a hands-on approach to using R.

The book begins with the basics, followed by chapters on factors, data frames, and lists. A discussion on conditionals and control flow, loops, and data structures follows. Applications to data sets are discussed in the succeeding chapters on the apply family and R charts and graphics. The last chapter of the book is dedicated to a detailed discussion of probability and statistical examples from various domains.

Interspersed with various programming examples throughout, the book provides multiple-choice questions, programming exercises, and simple concept application exercises at the end of relevant chapters.

Key Features

- Addresses topics such as bar charts and pie charts to perform real data analysis ranging from reading data stored in various file formats to plotting the results of the analysis
- Illustrates examples such as binary search tree implementation and accessing keyboard and monitor for general input and output
- Explains the various constructs in R and the nuances among them
- Explains how R can interface with CSV, Excel, XML, and JSON files
- Provides lucid examples covering ANOVA, advanced statistics, splines, and also covers data visualization through R

K G Srinivasa is Associate Professor and Head, Dept of Information Technology, CBP Govt Engineering College, Jaffarpur, New Delhi. He has over 20 years of combined teaching and research experience.

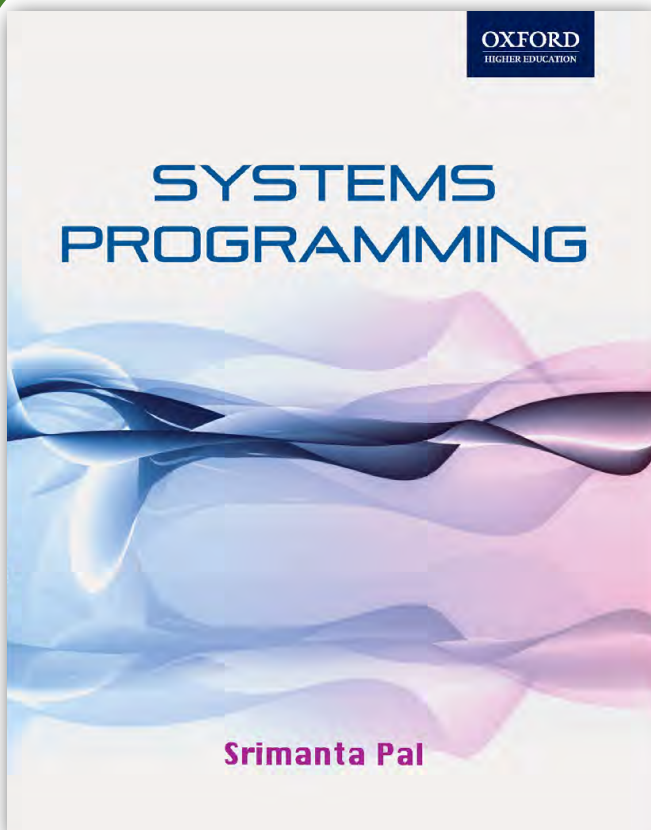
G M Siddesh is Associate Professor, Dept of Information Science and Engineering, Ramaiah Institute of Technology, Bengaluru. He has around a decade and a half years of experience in teaching and administration.

Chetan Shetty is Assistant Professor, Dept of Computer Science and Engineering, Ramaiah Institute of Technology, Bengaluru.

B J Sowmya is Assistant Professor, Dept of Computer Science and Engineering, Ramaiah Institute of Technology, Bengaluru.

eISBN: 9780199099184





SYSTEMS PROGRAMMING

Systems Programming is a textbook designed for the undergraduate students of information technology and computer science engineering. Comprehensive in its coverage, the book aims to provide an understanding of the design of assemblers, loaders, linkers, and macroprocessors.

The book is divided into five parts. The first part of the book deals with the background of systems programming and provides an overview of systems software. It then delves into machine structures and library structures. The second part deals with low-level translators, describing in detail topics such as machine and mnemonic languages, assembly languages, macro languages, macro programming, assemblers, linkers, loaders, and object code translators. The third and fourth parts of the book throw light on compilers and operating systems respectively. The last part discusses different system development tools. Components such as editors and debuggers are discussed in detail in this part along with a separate chapter on system administration.

Owing to its comprehensive coverage, the book will also serve as a ready reference for practising software engineers, besides students.

Key Features

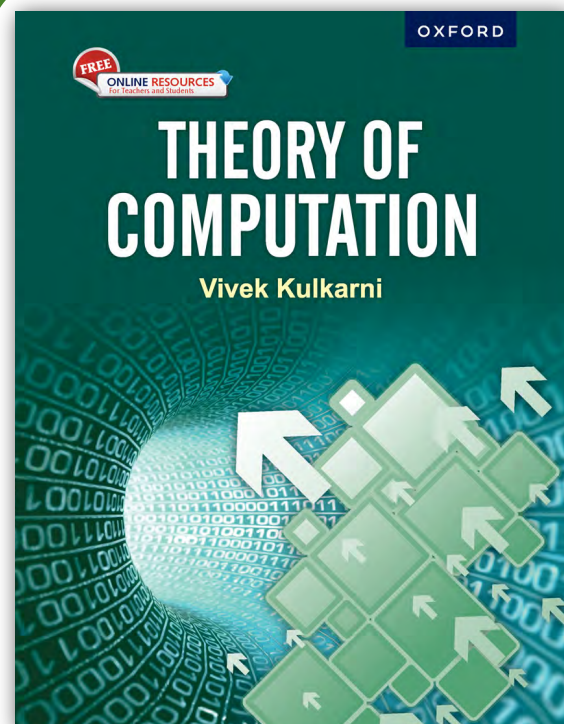
- Presents real-life analogies to clarify the concepts discussed
- Includes separate chapters on debuggers, editors, system administration, and a detailed coverage of operating systems
- Contains plenty of programming examples, algorithms, and conceptual as well as analytical exercises
- Contains an appendix comprising instruction sets for SIC/XE machine, Intel 8086, and MIPS

Srimanta Pal is currently Associate Professor, Indian Statistical Institute (ISI) Calcutta. A PhD from the Indian Institute of Technology Kharagpur, he obtained an MBA from Jadavpur University after completing his M Tech from ISI Calcutta. He has a teaching experience of around two decades in prestigious institutions such as the Indian Institute of Management Calcutta and Jadavpur University.

Dr Pal is the author of Numerical Methods and Mathematical Methods, both published by OUP. He has contributed numerous papers to national and international journals of repute.

Print ISBN: 9780198070887

eISBN: 9780199083749



THEORY OF COMPUTATION

Theory of Computation is designed to serve as a textbook for undergraduate students of computer science and engineering, computer applications, and information technology. It provides a comprehensive coverage of all the essential concepts of the subject.

The book begins with basic concepts such as symbols, alphabets, sets, relations, graphs, strings, and languages. It then delves into the important topics, including separate chapters on finite state machine, regular expressions, grammars, pushdown stack, Turing machine, parsing techniques, Post machine, undecidability, and complexity of problems. The chapter on production systems describes a computational model, called Markov and labelled Markov algorithms, which is different from the Turing model.

A comprehensive coverage of topics combined with a highly detailed pedagogy including plenty of solved examples, figures, notes, flow charts, and chapter-end exercises makes this text a complete package for students.

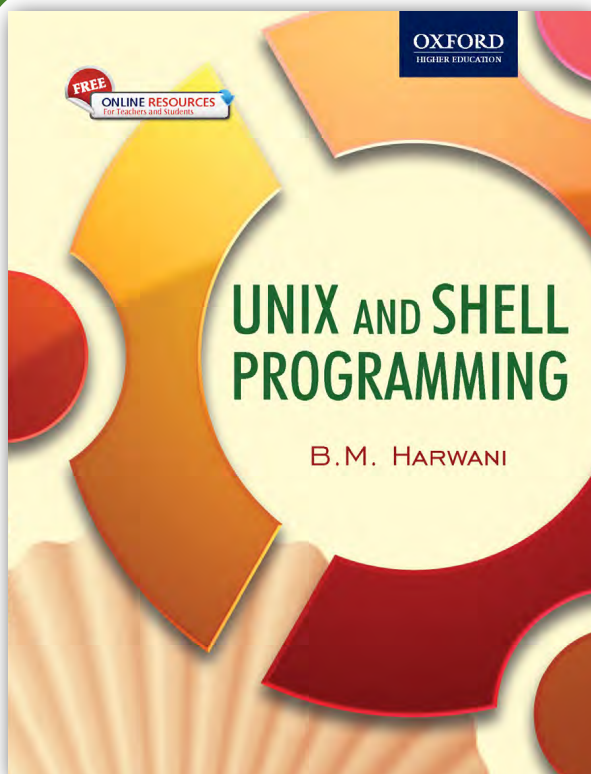
KEY FEATURES

- Presents each procedure in the text in algorithmic form for the readers to practise the concepts in any programming language of their choice
- Includes several solved examples in each chapter for better recapitulation of the concepts learnt
- Provides numerous objective type questions with answers, review questions, and exercises at the end of every chapter, graded as per Bloom's taxonomy principles
- Includes appendices containing the implementation details and C source codes for all the important algorithms discussed in the book, and five model question papers to assist students in preparing for their university examinations

Vivek Kulkarni is Chief Architect, Persistent Systems Ltd. He has more than 18 years of experience in academia and the software industry. In the past, he has served as subject chairman for multiple subjects in the Board of Computer Engineering, University of Pune. He has also worked in organizations such as BMC Software, Symantec Corporation, and Tech Mahindra. He is also one of the inventors of System and Method of Universal Programming Language Conversion, which has been internationally recognized and patented.

Print ISBN: 9780198084587

eISBN: 9780199083817



Print ISBN: 9780198082163

eISBN: 9780199083787

UNIX AND SHELL PROGRAMMING

Unix and Shell Programming is a textbook that has been specially designed for undergraduate and postgraduate students of engineering, computer science, information technology, and computer applications. The book seeks to provide a strong foundation on the working of the Unix operating system and its features.

The book begins with a description of an operating system and explores the features that have made Unix the most suitable operating system of its time. This is followed by an overview of file management and commonly used commands in Unix. It then covers file systems and compression techniques, processes and signals, vi editor, system calls, and AWK scripting. The book provides a detailed description of different types of editors and shell programming including Bourne, C, and interactive Korn shell. The last few chapters are dedicated to debugging and system development, language development, text-formatting tools, interprocess communication, and system administration.

The large number of examples and complete program scripts in the book will aid students in grasping the key concepts effectively.

Key Features

- Follows a bottom-up approach in explaining the concepts—from simple to large, complex, and critical commands and description
- Provides dedicated chapters on the three shells, namely, Bourne, Korn, and C
- Includes around 1000 solved examples for practising Unix commands and scripts
- Provides over 900 chapter-end exercises including objective-type questions, review questions, programming exercises, and brain teasers

B.M. Harwani is the founder and owner of Microchip Computer Education (MCE), Ajmer, an institute that provides computer education in all programming and web developing platforms. He has a teaching experience of more than 19 years and has developed the art of explaining even the most complicated topics in a simple and easy-to-understand manner. He has authored numerous books on subjects such as JSP, JSF, EJB, PHP, .NET, Joomla!, and jQuery and also contributes articles to various websites on a wide range of computer science subjects.

ELECTRICAL AND ELECTRONICS



Print ISBN: 9780198063575

eISBN: 9780199083473

8051 MICROCONTROLLERS MCS 51 FAMILY AND ITS VARIANTS

8051 Microcontrollers: MCS 51 Family and Its Variants is designed as a comprehensive textbook for undergraduate students of engineering. It provides a detailed exposure to product development using the 8-bit microcontroller MCS 51 and its variants. Starting from the fundamentals such as introduction to the architecture of the microcontroller chip, instruction set, and commonly used I/O and interfacing concepts; the text provides a large number of assembly language programming examples for proper understanding. A wide range of design applications are provided to introduce most of the concepts required for digital system design with microcontrollers. The most popular 8-bit microcontrollers used for designing intelligent digital instruments as well as controllers for a set of varied applications have been clearly explained and illustrated.

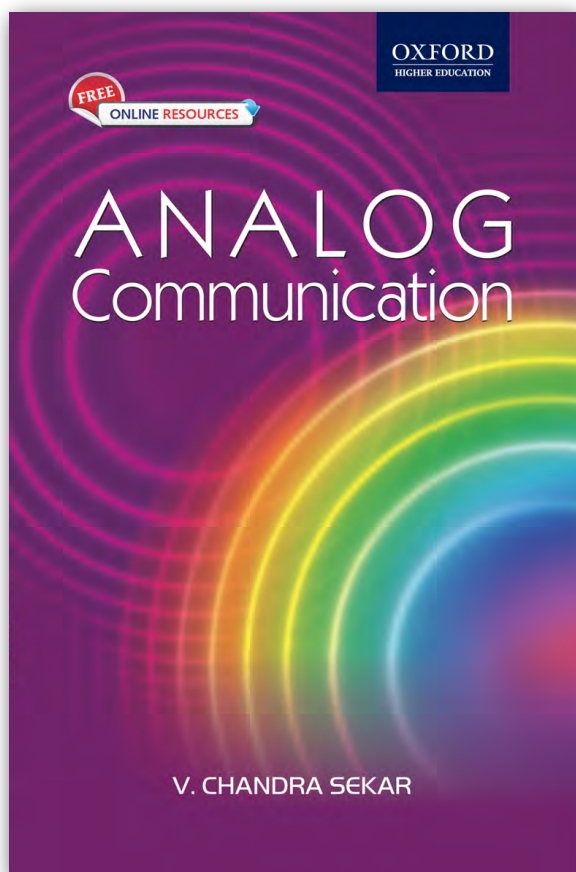
Key Features

- Covers the operation, initialization, interfacing, and programming of peripheral IC chips: 8255, 8253/8254, 8279, 8251, and RTC-DS1287
- Discusses popular microcontrollers such as Intel MCS 51, Atmel, and other variants
- Illustrates programming examples with algorithms and code segments
- Provides review questions and programming exercises at the end of every chapter
- Contains C programs in all chapters where applications are discussed
- Includes appendices containing instruction sets

Satish Shah is currently Professor, Electrical Engineering Department, Faculty of Technology, MS University of Baroda. His primary areas of interest are design of controllers with programmable devices such as microprocessors, microcontrollers, and digital signal processing. He has presented more than 25 research papers in national and international conferences. He has guided more than hundred projects at the undergraduate and postgraduate levels in this area.

Prof. Shah has conducted a faculty training program on "Intelligent Controllers" for the teachers of engineering colleges and polytechnics in Gujarat under TECHSAT program of Gujarat Council of Science & Technology, Gandhinagar via live telecast on ISRO education channel. He was awarded The Sir Thomas Ward Memorial Prize and a gold medal for the year 2008 by Institution of Engineers (India).





Print ISBN: 9780198061854

ANALOG COMMUNICATION

Analog Communication has been specially designed for undergraduate students of electrical engineering and electronics and communication engineering. It provides an exhaustive coverage of the fundamental concepts and recent developments in communication theory.

The book follows a bottom-up approach by building on the basic concepts of conventional modulation systems in the initial chapters and describing the latest trend in communication towards the end. After introducing the concepts of communication theory, it discusses amplitude modulation, angle modulation, and pulse modulation. It further covers the concept of time division multiplexing (TDM), frequency division multiplexing (FDM), and delta and adaptive delta modulation. The book also provides a chapter on digital communication, which briefly covers the concept of frequency shift keying (FSK), pulse shift keying (PSK), quadrature amplitude modulation (QAM), etc. A separate chapter on noise highlights the different types of noise encountered in communication systems and their effects on the various types of modulation.

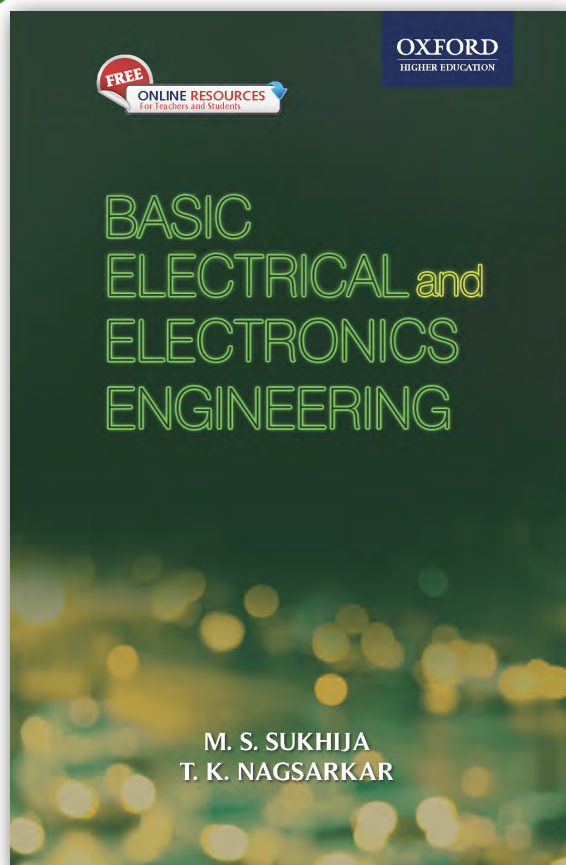
Written in a lucid manner, the book includes a large number of circuit diagrams, worked-out examples, and MATLAB examples, thereby enabling the readers to have a sound grasp of the concepts presented and their applications.

Key Features

- Discusses application-based case studies on software defined radio (SDR), function generator using DDS, and frequency synthesizer using PLL
- Illustrates many practical circuits in support of the text
- Provides coverage of topics such as Costas loop, direct digital synthesis, and frequency modulation feedback (FMFB) techniques
- Provides a large number of worked-out examples and graded questions for practice
- Highlights important formulae at the end of every chapter
- Includes additional MATLAB exercises as an appendix

V. Chandra Sekar is currently working as Professor and Head, Department of Electronics and Communication Engineering, SASTRA University, Kumbakonam, Tamil Nadu. He has over four decades of experience in the industry and academia. He has undertaken various projects of R&D in many organizations of repute, such as the Tata Institute of Fundamental Research (TIFR), Mumbai, and the Electronics Corporation of India Limited (ECIL), Hyderabad. He has also presented several technical papers in various seminars.

eISBN: 9780199083442



Print ISBN: 9780198081807

BASIC ELECTRICAL and ELECTRONICS ENGINEERING

Basic Electrical and Electronics Engineering has been written primarily for the first year undergraduate students of engineering to help them understand the basic principles of electrical and electronics engineering.

The first part of the book discusses the scope of electrical engineering and gives a detailed coverage on network theorems, magnetic circuits, transformer principles, alternating quantities, synchronous machines, induction motors, basic measuring instruments, and power systems. The second part of the book deals with the concepts of electronics engineering and provides an in-depth understanding of semiconductors and diodes, transistors, oscillators, and amplifiers. Additionally, the book explains the principles of transducers, telecommunication and information technology, digital systems, and control systems in separate chapters.

Key Features

- Provides an in-depth and all-inclusive introduction to the principles of electrical and electronics engineering
- Provides a large number of solved examples, objective type questions, and review questions
- Includes plenty of end-chapter numerical problems with answers to provide students adequate practice for examinations
- Includes carefully written chapter summaries to assist quick revision

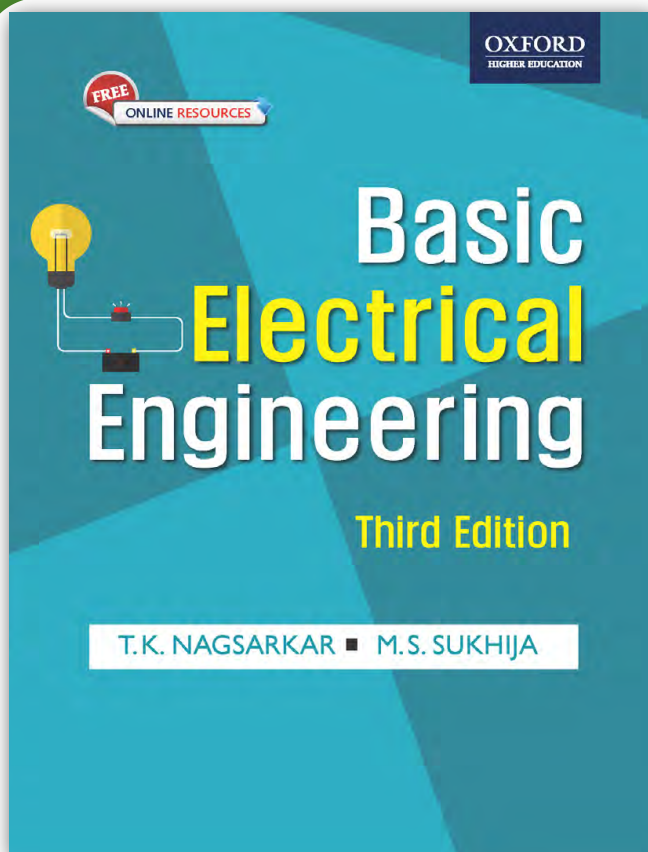
M.S. Sukhija, a PhD from Panjab University, was the founder principal of Guru Nanak Dev Engineering College, Bidar, Karnataka.

T.K. Nagsarkar obtained his BE from Visvesvaraya Regional College of Engineering, Nagpur, M Tech from IIT Kharagpur, and subsequently obtained his PhD from Panjab University, Chandigarh.

Dr Sukhija and Dr Nagsarkar have jointly authored *Basic Electrical Engineering*, *Power System Analysis*, and *Circuits and Networks: Analysis, Design and Synthesis* all published by OUP.

eISBN: 9780199083244





Print ISBN: 9780199479368

Basic Electrical Engineering

Third Edition

This third edition of **Basic Electrical Engineering** provides a lucid exposition of the principles of electrical engineering for both electrical as well as non-electrical undergraduate engineering students.

The book provides an exhaustive coverage of topics such as network theory and analysis, magnetic circuits and energy conversion, ac and dc machines, basic analogue and electronic instruments, and power systems. The book also gives an introduction to illumination concepts. The subject matter in each chapter is developed systematically and is supplemented with several solved examples and numerous chapter-end exercises.

Key Features

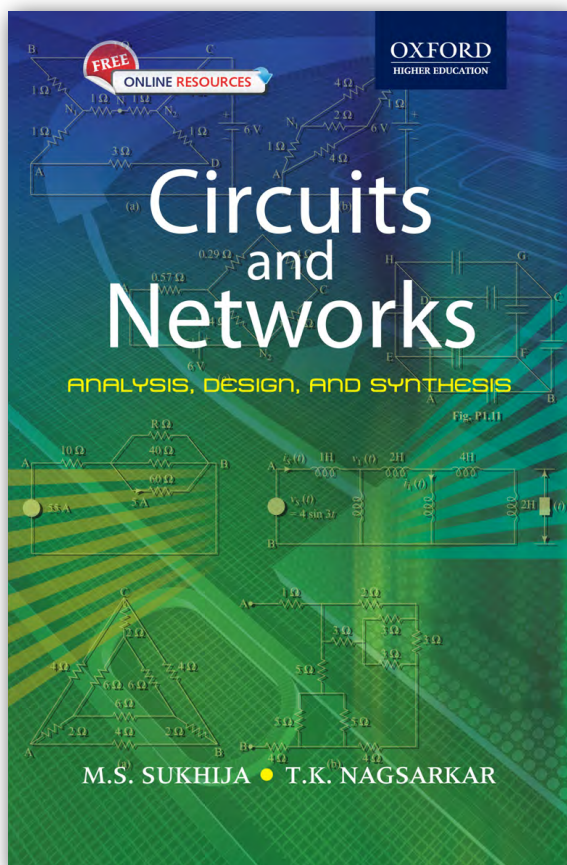
- In-depth introduction to the principles of electrical engineering
- Exhaustive coverage of network theory and analysis through a large number of illustrations and solved examples
- Addition of new topics based on review feedback such as Thevenin–Norton conversion, Millman's and Compensation theorems, multimeters, synchros, and so on.
- A new chapter on the basics of illumination
- Numerous solved examples, chapter-end numerical problems, as well as multiple choice questions with answers

T.K. Nagsarkar did BE from Visvesvaraya Regional College of Engineering, Nagpur, M Tech from IIT Kharagpur, and Ph D from Panjab University, Chandigarh. He was formerly Professor and Head, Department of Electrical Engineering, Punjab Engineering College, Chandigarh.

M.S. Sukhija, a Ph D from Panjab University and the founder principal of Guru Nanak Dev Engineering College, Bidar, Karnataka, has several years of teaching experience.

Dr Nagsarkar and Dr Sukhija have also jointly authored *Basic Electrical and Electronics Engineering* (OUP, 2012), *Power System Analysis 2e* (OUP, 2014), and *Circuits and Networks: Design, Analysis, and Synthesis 2e* (OUP, 2016).

eISBN: 9780199094448



Print ISBN: 9780198061878

Circuits and Networks

ANALYSIS, DESIGN, AND SYNTHESIS

Circuits and Networks: Analysis, Design, and Synthesis is specially structured for the undergraduate students of electrical, electronics, and instrumentation engineering. Specially prepared to provide an in-depth knowledge of electrical circuit analysis, design, and synthesis, the book provides a comprehensive coverage of each topic with equal emphasis on theory and practice.

Beginning with the basic concepts of electrical circuits, the book includes chapters on nodal and mesh analyses, signals and waveforms, reactive circuits, network theorems, graph theory, Laplace transforms, network functions, two-port networks, filters, and attenuators. Written in a logical style, the book provides the applications of various tools and techniques for analysis and synthesis of circuits through typical solved examples, numerous figures, and a large number of objective and numerical problems for practice.

Key Features

- Numerous solved examples interspersed with text that apply the theoretical concepts learned
- Key formulae highlighted at the end of every chapter for easy revision
- Separate appendices on MATLAB and PSpice
- Self-appraisal test at the end of the book for a holistic chapter-wise evaluation

M.S. Sukhija, a Ph D from Panjab University, was the founder principal of Guru Nanak Dev Engineering College, Bidar, Karnataka. He embodies within himself over three decades of experience constituted of teaching and research, industrial R&D, institutional administration, and international educational consultancy. He has several research publications to his credit.

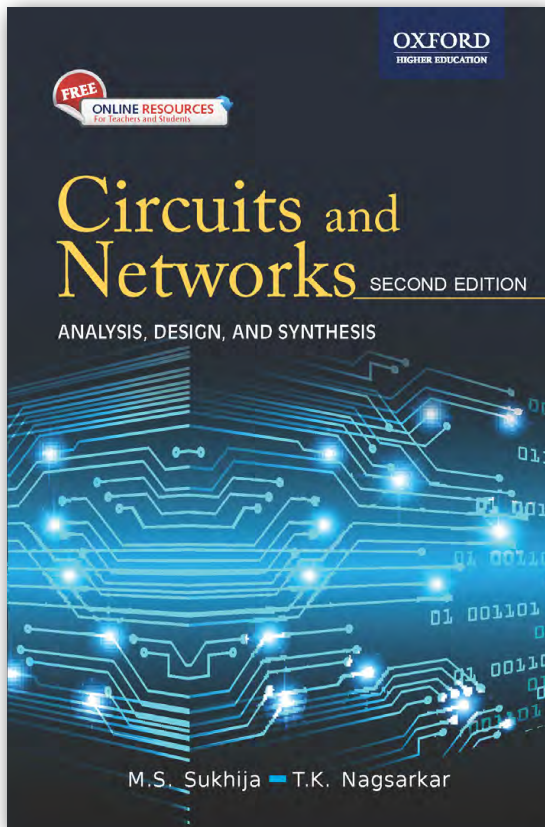
T.K. Nagsarkar obtained his BE from Visvesvaraya Regional College of Engineering, Nagpur, M Tech from IIT Kharagpur, and Ph D from Panjab University, Chandigarh. He has over three decades of experience in teaching, research, and consultancy in Punjab Engineering College, Chandigarh from where he retired as Professor and Head, Department of Electrical Engineering. He is a Fellow of Institution of Engineers (India) and a Senior Member of IEEE (USA).

Dr Nagsarkar and Dr Sukhija have also jointly authored *Basic Electrical Engineering*, *Basic Electrical and Electronics Engineering*, and *Power System Analysis*, all with OUP.

eISBN: 9780199083459



TOC list



Print ISBN: 9780199460922

Circuits and Networks SECOND EDITION

This second edition of *Circuits and Networks: Analysis, Design, and Synthesis* serves as a textbook for the undergraduate students of electrical, electronics, and instrumentation engineering. The new approach using MATLAB-based problem solving enhances the book's utility among professionals and practitioners as well as for laboratory-based learning.

The new edition is succinct in its method of explanation and provides increased number of solved examples for better understanding of concepts. It introduces new topics such as Bode plots, four-wire systems, and composite filters in a very lucid manner that enhances the overall coverage of the book. The vast number of numerical problems, neat circuit diagrams, and applications of various tools and techniques continue to be the best pedagogical features of this book. This book is an invaluable comprehensive resource for students, faculty, and professionals.

New to This Edition

- Approximately 400 new solved examples
- MATLAB-based solved and unsolved problems
- Addition of new topics: sawtooth signals, doublet, four-wire system, terminating half section, composite filters, Bode plots, etc.
- Simplified and lucid manner of explanation

Praise for the First Edition

The book provides a good knowledge base ... 'Three Phase Circuits' and 'Problems based on Mesh and Nodal Analysis' are the best explained topics of the book.

Dr S. Nagarajan (Professor and Head, Jerusalem College of Engineering, Chennai)

Basics are very clearly explained in this textbook. Every student can easily understand the subject. Solved problems are very helpful to practice.

P.B.N. Sarojini (TRR College of Engineering and Technology, JNTU Hyderabad)

M.S. Sukhija, a PhD from Panjab University, was the founder principal of Guru Nanak Dev Engineering College, Bidar, Karnataka.

T.K. Nagsarkar was formerly Professor and Head, Department of Electrical Engineering, Punjab Engineering College, Chandigarh.

Dr Nagsarkar and Dr Sukhija have also jointly authored *Basic Electrical Engineering 2e* (OUP, 2011), *Basic Electrical and Electronics Engineering* (OUP, 2012), and *Power System Analysis 2e* (OUP, 2014).

eISBN: 9780199099047



Print ISBN: 9780198078050

COMMUNICATION SYSTEMS

Communication Systems is a textbook designed specifically for students of computer science, information technology, and electrical engineering disciplines. It provides a balance between theory and the related applications with the help of figures, solved problems, numerical exercises, and review questions.

The book starts with a detailed discussion on the basic principles of analog communication and the essential concepts of digital communication. The subsequent chapters elaborate upon the various types of transmission media such as transmission lines, waveguides, microwave, optical, satellite, television, and radar, followed by a discussion on data communication and its equipment. The last chapter is devoted to 'spread spectrum modulation'—a recent technique which enables the transmission of information through multiple frequencies, ensuring greater security.

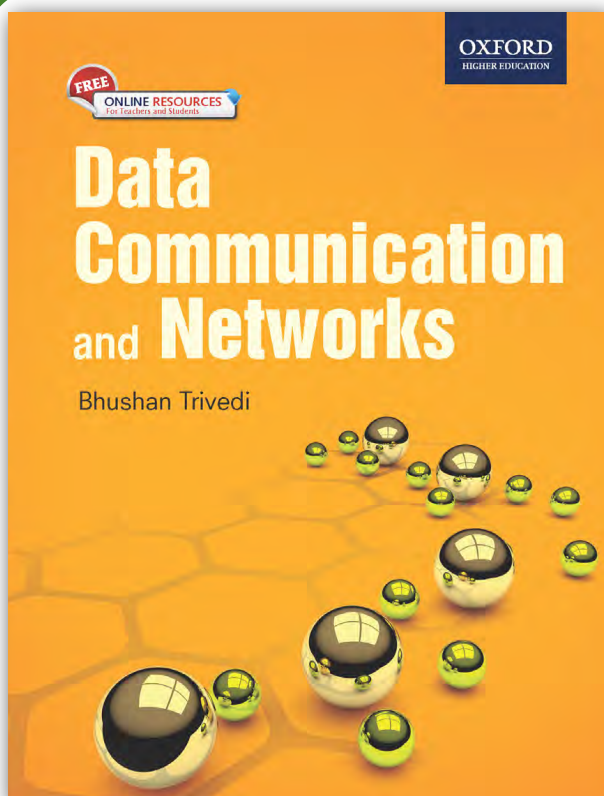
Key Features

- Provides discussion on topics such as waveform distortion, distortionless line, waveguide impedance matching, and microstrip antennas
- Includes practical circuits for topics such as FM detection and generation, transmitters and receivers, and phase-locked loop (PLL)
- Provides application case studies on PLL frequency synthesizer and digital microwave radio
- Includes an appendix on MATLAB programs with their representative outputs for various modulation techniques including spread spectrum modulation and Smith chart generation

V. Chandra Sekar is Head, Department of Electronics and Communication Engineering, SASTRA University, Srinivasa Ramanujan Centre, Kumbakonam, Tamil Nadu. In a career spanning over four decades, he has served as an academician as well as undertaken various R&D projects in reputed organizations, such as the TIFR, Bombay and ECIL, Hyderabad. He has also presented several research papers in various seminars and is the author of *Analog Communication*.

eISBN: 9780199083282





Print ISBN: 9780199455997

Data Communication and Networks

Data Communication and Networks is designed as a textbook for undergraduate engineering students of computer science, information technology (IT), electronics and communications, and electrical disciplines as well as those pursuing MCA and BSc (IT) and MSc (IT). The book provides exhaustive and up-to-date coverage of all the topics in data communication and networks. It lays emphasis on conceptual understanding and follows the layered approach for discussing the various network layers.

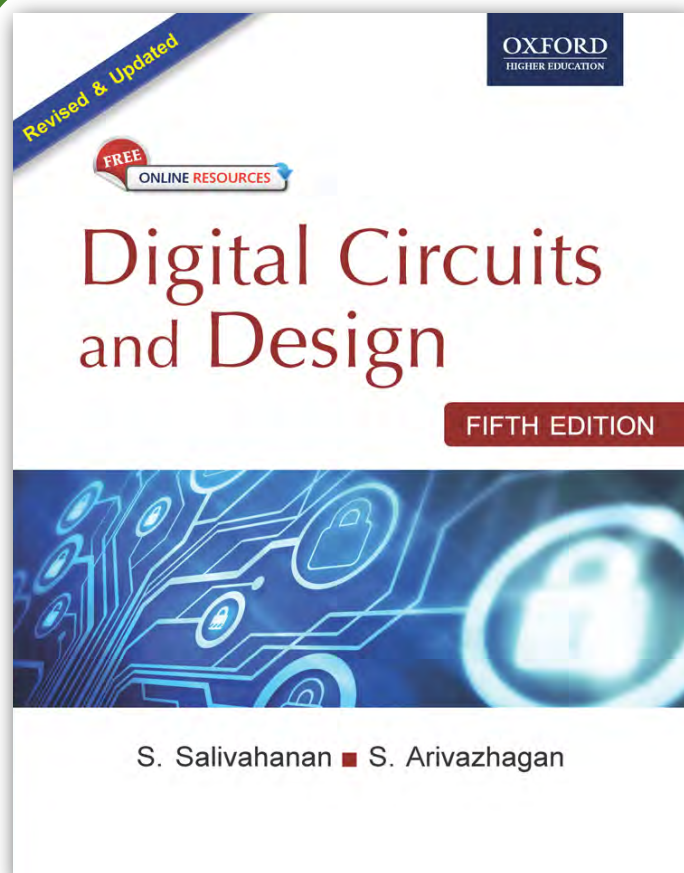
The book first acquaints the readers with the fundamentals of data communication and computer networks and then moves on to discuss the network layers in detail. The book covers cryptography and network security in separate chapters. The text is interspersed with several analogies to enable easy understanding of concepts. At the end of every chapter, many exercises including review questions, numerical problems, and multiple-choice questions are provided to assess students' understanding of the concepts learnt.

Key Features

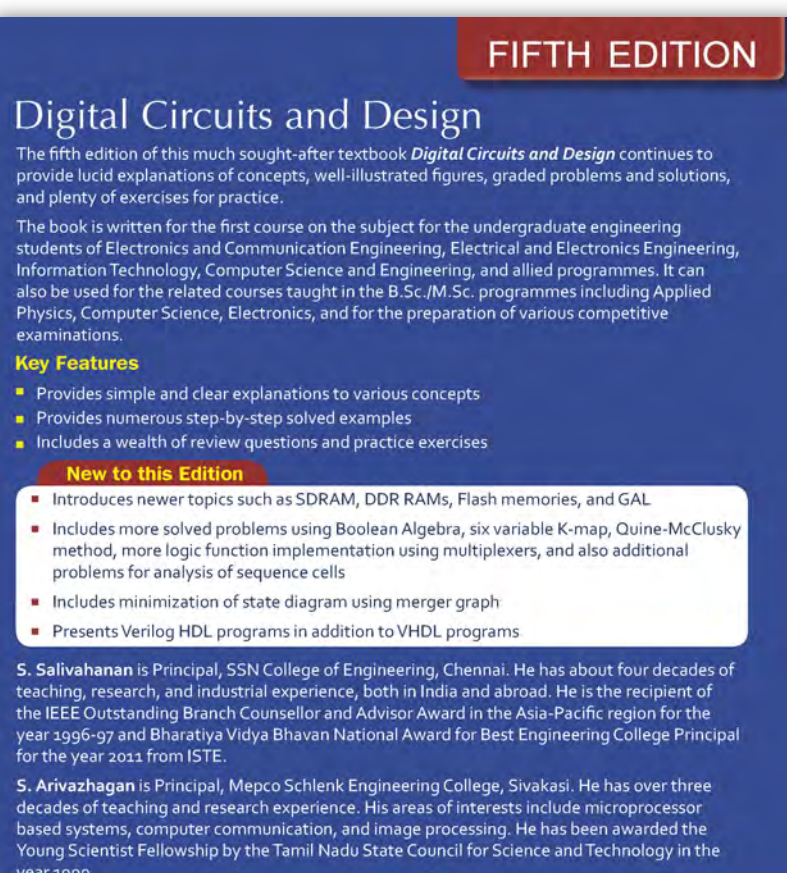
- Incorporates the layered approach emphasizing the TCP/IP model with real-world applications such as the Internet and ethernet technologies
- Covers the fundamentals of the data link layer and its related protocols, medium access sublayer, and classful and classless addressing
- Elucidates the basics of the network layer including routing algorithms, protocols, datagram and IP routing, IPSec, and IPv6
- Provides in-depth coverage of application layer concepts such as DNS, WWW, HTTP, email system, FTP, bluetooth, multimedia, and DHCP
- Includes numerous illustrations, sidebars, tables, keywords, and points to remember to enable quick recapitulation

Bhushan Trivedi is presently Director, GLS Institute of Computer Technology (GLS-ICT) and Dean, School of Computer Technology at GLS University, Ahmedabad.

eISBN: 9780199099009

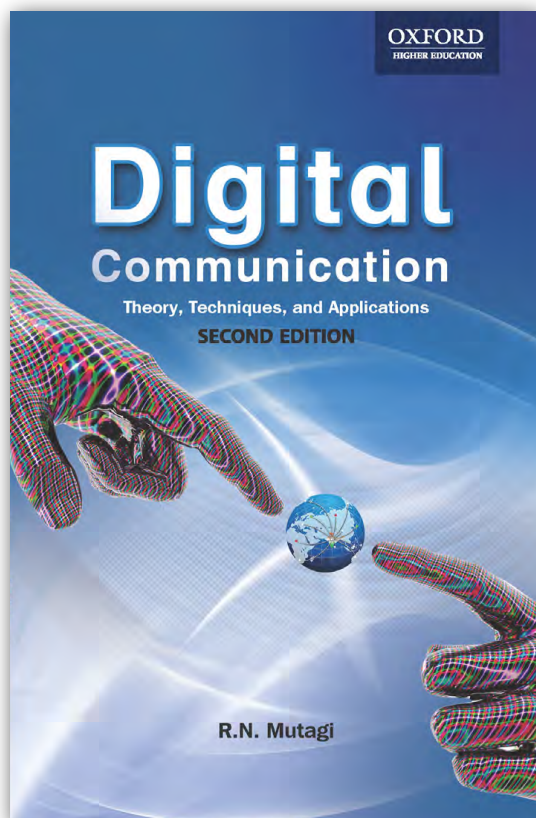


Print ISBN: 9780199488681



eISBN: 9780199098903





Print ISBN: 9780198087229

Digital Communication **SECOND EDITION**

Digital Communication Theory, Techniques, and Applications is designed for undergraduate students of engineering for a course on digital communication. The second edition of this book treats spread spectrum communication techniques as an exclusive chapter.

The book starts from the basics of signals and systems and builds the preliminary concepts through the chapters on probability and random processes, and information theory. It then goes on to describe core concepts such as digital coding, multiplexing and multiple access, modulation techniques, demodulation, error control coding, and spread spectrum communication. The last chapter illustrates the concepts learnt in the earlier chapters through applications in optical, satellite, and wireless communication domains.

Key Features

- Discusses latest compression standards, such as DAB, MPEG, H.264, and MP3
- Provides around 140 graded solved problems, review questions, and challenging exercises for practice
- Includes a detailed laboratory manual (Appendix D) with procedure, observation table, questions, and MATLAB codes to help in simulating many theoretical functions

New to the Second Edition

- Treats spread spectrum communication as an exclusive chapter
- Includes new sections on pulse width modulation (PWM), pulse position modulation (PPM), burst synchronization, voice codecs, and combo chips
- Provides new solved problems, review questions, and exercises
- Includes hints (final answers) to all relevant exercise problems (Appendix G)

Praise for the First Edition

Your book on digital communication is highly recommended for my students as it covers a major portion of the syllabus. The topics have been discussed very elaborately and in an easy-to-understand language.

—Yasmeen Hassan, Integral University, Lucknow

All the derivations have been dealt with in a good manner. All the chapters have been organized correctly.

—R. Tamil Selvi, RMK Engineering College, Chennai

R.N. Mutagi is Professor and Head, Department of Electronics and Communication Engineering, Indus Institute of Technology and Engineering, Indus University, Ahmedabad.

eISBN: 9780199083251



Print ISBN: 9780198061830

DIGITAL ELECTRONICS

Digital Electronics is specially designed as a textbook for undergraduate students of electronics, communication, computer science, and electrical and instrumentation engineering for an introductory course on digital electronics or digital system and design. The book will also be useful for students pursuing postgraduate courses in electronics and computer science.

Beginning with the fundamental concepts such as logic families, number systems and codes, Boolean algebra and logic gates, and combinational circuits, the book moves on to cover the applied aspects such as sequential logic, asynchronous sequential circuits, algorithmic state machines, programmable logic devices, converters, and semiconductor memories.

Through its lucid presentation, the book seeks to impart a thorough understanding of the basic concepts of digital electronics and its applications.

Key Features

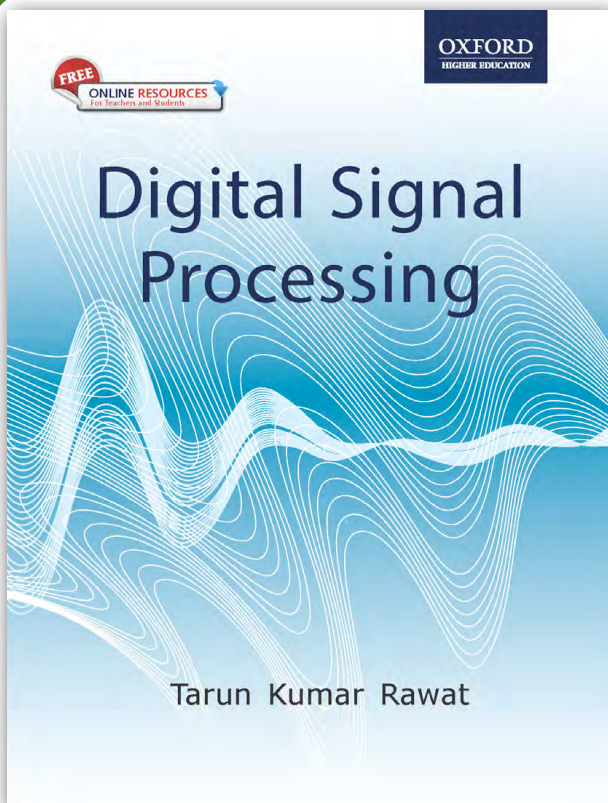
- Establishes a balance between the theoretical concepts of digital electronics and its applications
- Includes a large number of solved examples and numerous illustrations supporting the text for better understanding of complex topics
- Includes separate chapters on the number system, synchronous and asynchronous circuits, and K-maps
- Includes plenty of multiple choice questions and review questions for practice
- Provides a glossary of the important terms at the end of each chapter

Dr G. K. Kharate is currently Principal, Matoshri College of Engineering and Research Centre, Nashik. A Ph D from the University of Pune, Dr Kharate has more than 20 years of teaching experience. He is also a fellow member of the Institution of Electronics and Telecommunication Engineers (IETE) and a life member of many other professional bodies of repute like the Indian Society for Technical Education (ISTE), the Institution of Engineers (India), and the Computer Society of India.

Dr Kharate has also published a number of articles in national and international journals of repute and organized several conferences and workshops in his areas of research.

eISBN: 9780199083367





Print ISBN: 9780198081937

Digital Signal Processing

Digital Signal Processing is a comprehensive textbook designed for undergraduate and postgraduate students of engineering. Following a step-by-step approach, the book will help students master the fundamental concepts and applications of digital signal processing (DSP). Each topic is explained lucidly through abstract mathematical reasoning, illustrations, and solved examples.

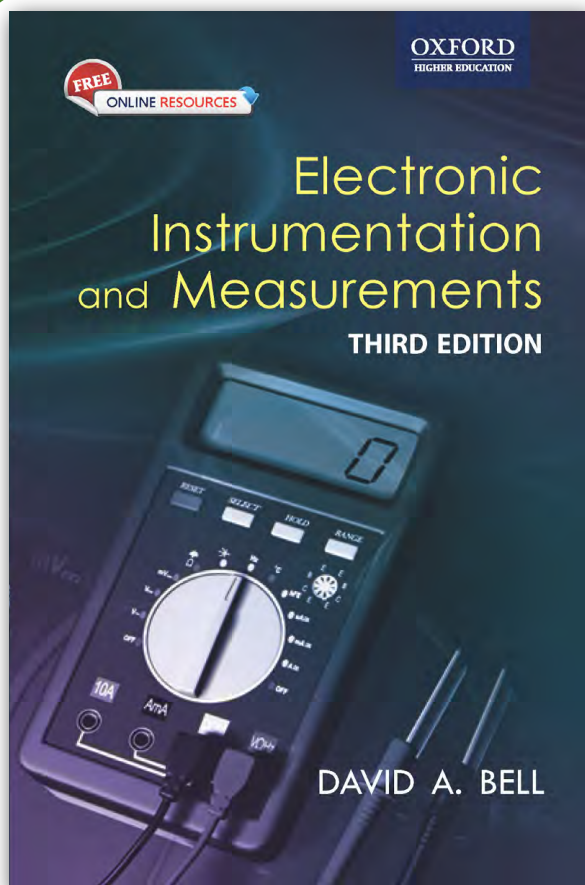
Divided into 17 chapters, this book presents the introductory topics such as discrete-time signals and systems, sampling and quantization, convolution, discrete-time Fourier series, discrete-time Fourier transform, and z-transform in a detailed manner. Further, topics such as discrete Fourier transform (DFT), fast Fourier transform (FFT), filter concepts, filter structures, and finite impulse response (FIR) and infinite impulse response (IIR) filter designs are dealt with in detail. It also covers advanced topics such as finite word length effects, multirate DSP, optimum linear filters, and spectrum estimation techniques. Throughout the book, solved examples and MATLAB-based examples are provided.

Key Features

- Provides an understanding of the fundamentals, implementation, and applications of DSP from a practical point of view
- Contains mathematical derivations presented in the simplest possible way
- Contains more than 600 solved examples with step-by-step solutions interspersed within the text
- Includes a section on MATLAB programs at the end of all relevant chapters
- Provides numerous end-of-chapter problems and multiple-choice questions (with answers)

Tarun Kumar Rawat is Assistant Professor of Electronics and Communication Engineering at Netaji Subhas Institute of Technology (NSIT), New Delhi.

eISBN: 9780199090044



Print ISBN: 9780195696141

Electronic Instrumentation and Measurements

THIRD EDITION

Electronic Instrumentation and Measurements is designed as a textbook for undergraduate students of electrical, electronics, and instrumentation disciplines. It presents a comprehensive treatment of the operation, performance, applications, and limitations of both digital and analog instruments, normally encountered in an electronics laboratory.

Starting with SI units and measurement errors, the text covers electromechanical instruments, analog electronic instruments, digital voltmeters, frequency meters, and resistance, inductance, and capacitance measurement techniques. The specialized instruments investigated in the latter half of the book include analog oscilloscopes, digital storage oscilloscopes, signal generators, waveform analysers, and graphic recording instruments. Instrument calibration is also discussed as well as power and energy measurement. To make the text comprehensive, dedicated chapters on magnetic measurements, transducers, and telemetry have been included.

New to the Third Edition

Every part of the book has been revised, rewritten, and rearranged to strive for the most appropriate coverage. The most notable additions are

- Five new chapters: classical AC bridge methods, power and energy measurement, magnetic measurements, introduction to transducers, and telemetry
- Improved coverage on ground resistance measurement and cable fault location

Key Features

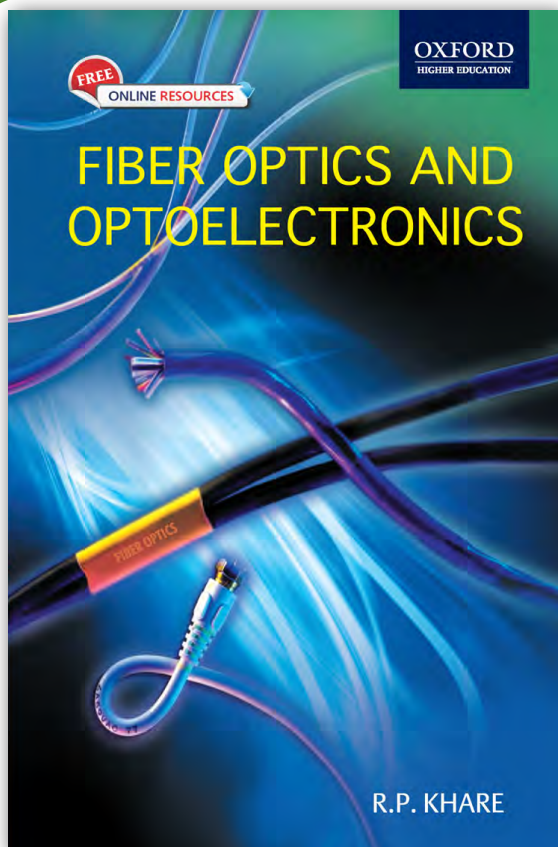
- Practical worked-out examples throughout the text to link theory with application
- Numerous illustrations to explain the concepts
- Plenty of chapter-end review questions and unsolved problems for practice

David A. Bell is a professional engineer who was employed as a circuit design specialist in the electronics industry for many years before becoming a professor at Lambton College of Applied Arts and Technology in Sarnia, Ontario, Canada. He has written five textbooks in the area of electronics engineering, which have been in use in engineering institutions around the world including India.

eISBN: 9780199098187



TOC list



Print ISBN: 9780195669305

FIBER OPTICS AND OPTOELECTRONICS

Developed as an introductory course, this up-to-date text discusses the major building blocks of present-day fiber-optic systems and presents their use in communications and sensing.

Starting with easy-to-understand ray propagation in optical fibers, the book progresses towards the more complex topics of wave propagation in planar and cylindrical waveguides. Special emphasis has been given to the treatment of single-mode fibers—the backbone of present-day optical communication systems. It also offers a detailed treatment of the theory behind optoelectronic sources (LEDs and injection laser diodes), detectors, modulators, and optical amplifiers. Contemporary in terms of technology, it presents topics such as erbium-doped fiber amplifiers (EDFAs) and wavelength-division multiplexing (WDM) along with dense WDM.

Building upon these fundamental principles, the book introduces the reader to system design considerations for analog and digital fiber-optic communications. Emphasis has also been given to fiber-optic sensors and laser-based systems along with their industrial and other applications.

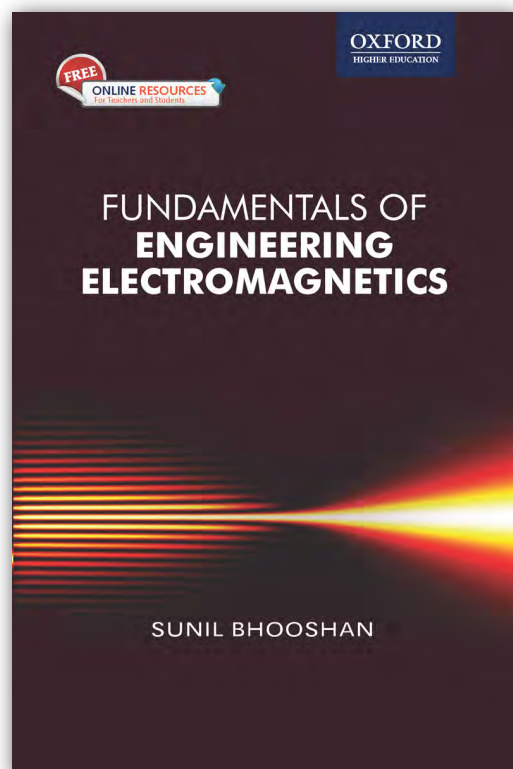
This student-friendly text would be very useful to undergraduate students pursuing instrumentation, electronics, and communication engineering. It would also prove to be a good text for postgraduate students of physics.

KEY FEATURES

- Explains all relevant topics related to modern fiber-optic communications
- Includes fiber-optic sensors, to aid the reader in understanding non-communication applications of fiber optics
- Includes a chapter on laser-based systems and their applications in various fields
- Contains a separate chapter on *lab-oriented projects* involving PC-based/manual measurements
- Reinforces theoretical concepts by providing numerous solved examples, along with multiple choice questions and review questions

R.P. Khare is presently Professor of Physics/Instrumentation at Birla Institute of Technology and Science, Pilani. A PhD in optical materials, he has published several research papers in Indian and international journals and has several years of teaching experience in fiber optics and optoelectronics.

eISBN: 9780199083374



Print ISBN: 9780198077947

FUNDAMENTALS OF ENGINEERING ELECTROMAGNETICS

Fundamentals of Engineering Electromagnetics is designed for undergraduate engineering courses in electromagnetics. The book aims to provide students of electrical engineering and electronics and communication engineering with an understanding of the fundamentals of electromagnetic fields and their applications.

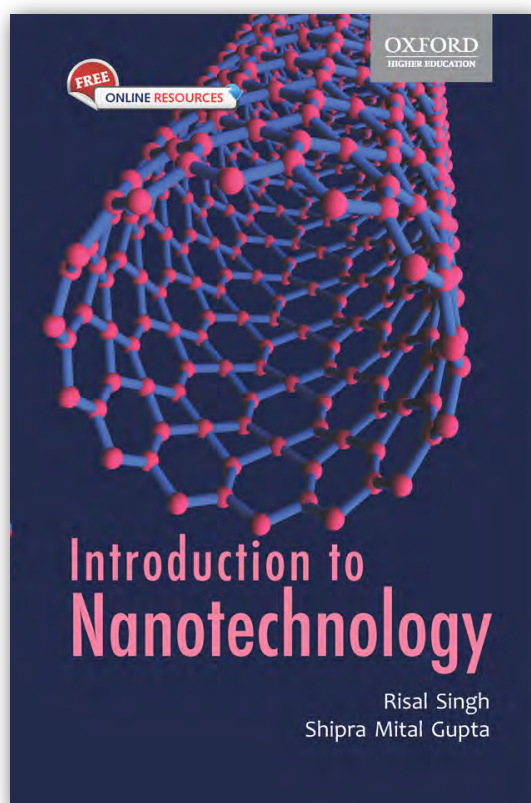
The book begins with the basics of mathematics in Part I such as scalars and vectors, coordinate systems, and vector calculus. Part II discusses electrostatics covering topics such as electric field, electrostatic energy and potential, Laplace's and Poisson's equations. Part III focusses on magnetostatics detailing steady magnetic fields, magnetic forces, inductance, and magnetisation. Part IV deals with time-varying fields and radiation and propagation. In this section, antennas and radio wave propagation have been introduced. The appendices at the end of the book equip the students with all the important tables and information they would require for this course.

Key Features

- Includes over 250 illustrations, many of which provide a three-dimensional view for better understanding
- Provides additional interesting information related to the topic under discussion
- Provides numerous solved examples within the chapter, and a self-assessment section at the end of the chapter comprising numerical problems, objective type questions, review questions, and short-answer questions
- Provides quick recapitulation of important formulae and definitions

Sunil Bhooshan is currently Professor and Head, Department of Electronics and Communication Engineering, Jaypee University of Information Technology (JUIT), Waknaghat.

eISBN: 9780199083275



Print ISBN: 9780199456789

Introduction to Nanotechnology

Introduction to Nanotechnology is designed to serve as a textbook for undergraduate students of various disciplines. The book provides a detailed description of the fundamental principles of nanotechnology in an easy and effective manner. It also serves as a reference material for first year postgraduate students and as an easy guide for readers interested in exploring the field of nanotechnology.

Beginning with an introduction to basic concepts such as crystal structures, energy bands, and quantum mechanical aspects of nanomaterials, the book moves on to discuss nanomaterials such as fullerenes, carbon nanotubes, and their applications. It presents the basic concepts of physical, chemical, and biological methods of synthesis; various techniques of characterization of nanostructures such as electron and optical microscopy; use of nanomaterials in fabricating devices for different applications; and emphasizes the future prospects of nanotechnology in different fields.

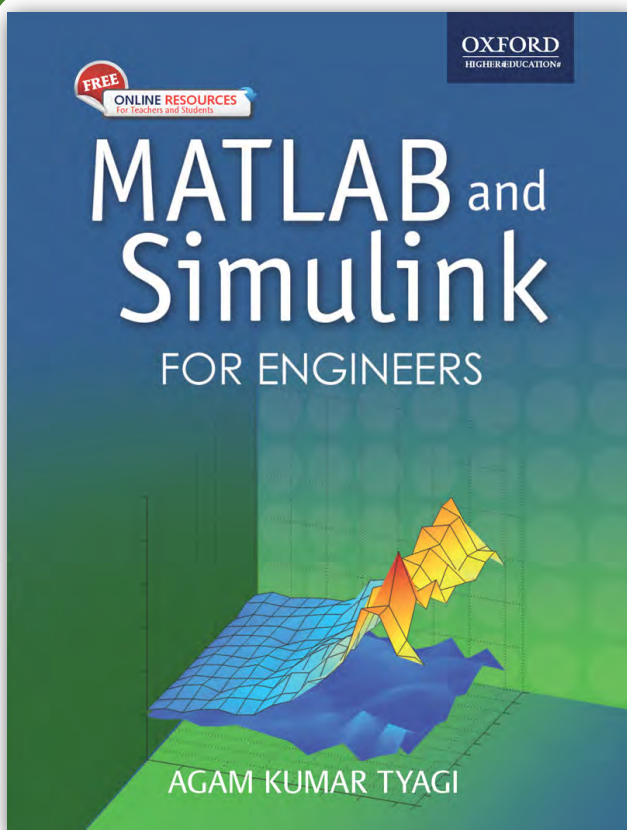
Key Features

- Provides an introduction to the basic concepts of nanotechnology
- Discusses advanced topics such as quantum nanoelectronics and MEMS in detail
- Includes chapter summaries to assist in quick revision and a comprehensive glossary for quick reference
- Includes review questions and objective questions, such as multiple-choice questions, fill in the blanks, and match the following, at the end of each chapter

Risal Singh is a former Scientist, Solid State Physics Laboratory (DRDO) in Delhi. He has also worked as Alexander von Humboldt Research Fellow at the Institute of Semiconductor Electronics, Aachen Technical University, Aachen and Institute of Semiconductor Electronics, Stuttgart University in Germany.

Shipra Mital Gupta is currently Assistant Professor, University School of Basic and Applied Sciences, Guru Gobind Singh Indraprastha University, Delhi. She has also been a visiting scientist at the National Institute of Advanced Industrial Science and Technology (AIST), Japan.

eISBN: 9780199099023



Print ISBN: 9780198072447

MATLAB and Simulink FOR ENGINEERS

MATLAB® is a high-performance technical computing language with an incredibly rich variety of functions and enormous programming capabilities, and Simulink is a software package for modeling, simulating, and analysing dynamic systems. Both MATLAB and Simulink are integrated and one can simulate, analyse, or revise the models in either environment. *MATLAB and Simulink for Engineers* captures the beauty of this software and will serve as a self-study material for students of electrical, computer, and mechanical engineering who would be required to use this software for varied courses.

Based on version 2010a of MATLAB, the book begins with an introduction to MATLAB programming describing the MATLAB toolbar and Simulink toolboxes. It goes on to discuss various MATLAB operators, functions, and graphics in detail. Analog and digital communication techniques are covered in depth. Applications of Simulink and MATLAB in electrical engineering, electrical machines and power system projects, simulation of rectifiers, inverters, choppers, and cycloconverters are presented in detail. Applications in computer science, communication, and mechanical engineering are also discussed. It also includes a chapter on recent developments in this area covering topics such as the matrix converter, modulation techniques, and PWM rectifiers.

The book provides numerous MATLAB programs, tested and run for various projects in different disciplines of engineering. The programs with their outputs, through various screenshots of the MATLAB windows, will help readers familiarise themselves with the software.

Key Features

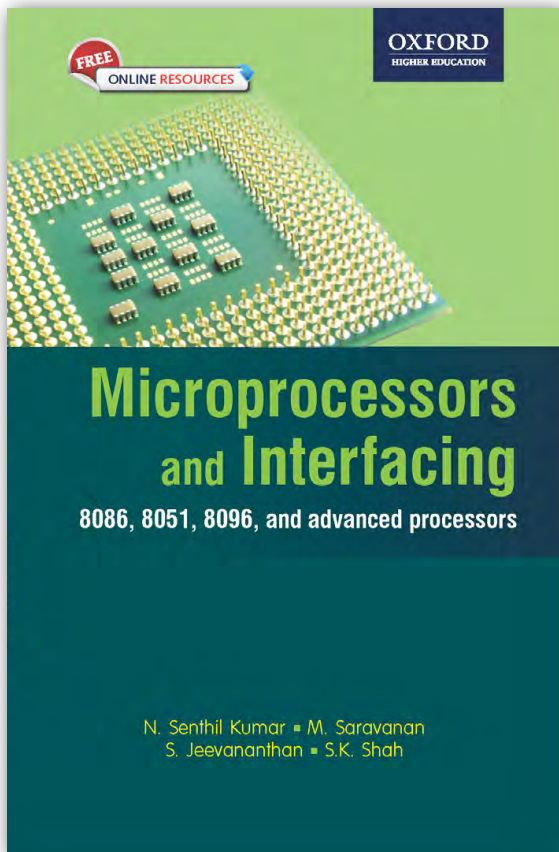
- Uses version 2010a of MATLAB
- Includes important MATLAB graphs in color
- Emphasizes on circuit simulations and designing using Simulink

Agam Kumar Tyagi is a professional consultant, educator, and speaker with many years of practical, hands-on experience in industrial and education fields. An M Tech in engineering systems, he has taught in various engineering institutes such as University of Petroleum and Energy Studies, Dehradun, BITS Pilani, and Amity University, Noida. He has published numerous articles in national and international journals of repute.

eISBN: 9780199083305



TOC list



Print ISBN: 9780198079064

Microprocessors and Interfacing

Microprocessors and Interfacing is a textbook designed for engineering courses covering a study of various microprocessors, microcontrollers, their interfacing, programming, and applications.

The book, in 20 chapters, provides a brief overview of the 8085 processor, followed by a detailed discussion of the 8086 architecture, programming, and interfacing concepts. The book also provides a brief introduction to the 8088 processor, bringing out its architectural difference with the 8086 processor. Subsequently, the book discusses the 8-bit 8051 and 16-bit 8096 microcontrollers, and advanced processors such as 80186, 80286, 80386, 80486, Pentium, and embedded controllers such as RISC, CISC, SUNSPARC, and ARM. The last chapter focuses on hybrid programming techniques to provide an understanding of the efficient combination of assembly language with C/C++.

Providing a balance between theory and practice, the book is interspersed with complete ALP codes, review questions, programming, and design-based exercises.

Key Features

- Provides assembly language program codes with corresponding comments
- Explains memory and peripheral interfacing concepts in an easily understandable way
- Discusses case studies on electronic weighing machine, temperature monitoring and control, DC motor speed monitoring, and control as an appendix
- Provides numerous programming examples, think and answer type questions, design-based exercises, and programming exercises
- Includes more than 200 multiple choice questions on 8085, 8086, and 8051 processors

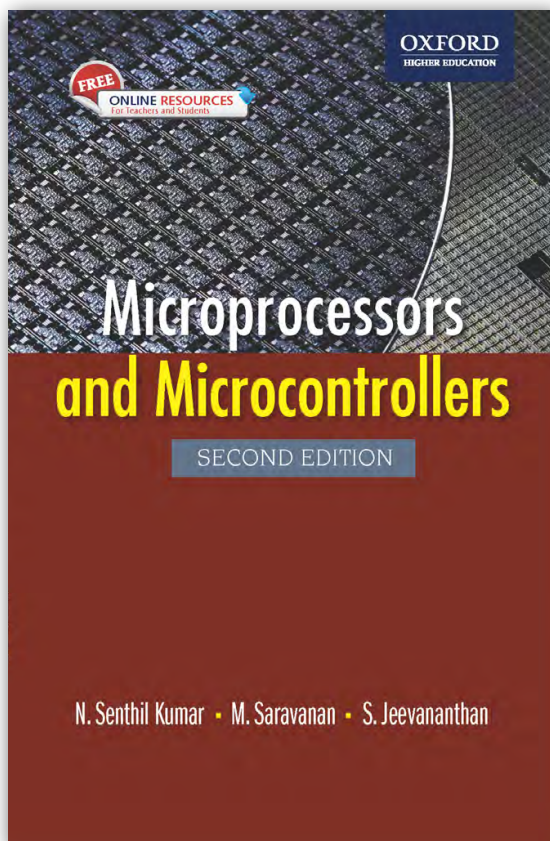
N. Senthil Kumar is Professor, Department of Electrical and Electronics Engineering, Mepco Schlenk Engineering College, Sivakasi, Tamil Nadu. He has more than 20 years of active teaching and research experience.

M. Saravanan is Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai, Tamil Nadu. He has more than 15 years of teaching and research experience.

S. Jeevananthan is Professor, Department of Electrical and Electronics Engineering, Pondicherry Engineering College, Puducherry. He has a decade of experience in teaching undergraduates and postgraduates.

S.K. Shah is Professor, Department of Electrical Engineering, The Maharaja Sayajirao University of Baroda, Vadodara. He has over 30 years of teaching and research experience.

eISBN: 9780199083268



Print ISBN: 9780199466597

Microprocessors and Microcontrollers SECOND EDITION

Microprocessors and Microcontrollers is an established textbook for engineering students pursuing a course in electrical and electronics, electronics and communication, computer science, and information technology. It is also a useful resource for practising professionals. This **second edition** of the book goes one step further in providing a comprehensive coverage of topics and an application-oriented approach.

The book is divided into six parts that cover the architecture, programming, and interfacing of 8085 and 8086 microprocessors, and 8096 and 8051 microcontrollers. Its lucid explanation and strong learning features such as case studies, design-based exercises, review questions, and assembly language programming examples lay a solid foundation for the subject. The additional C language programs for the 8051 microcontroller enhance the spectrum of coverage of the book.

New to This Edition

- Case studies: Further to the already covered real-life applications such as traffic light control, washing machine control and elevator control, this edition includes new case studies on microprocessor-based temperature control system and thyristor triggering control.
- Additional topics: Additional timing diagrams for 8085, debugging of assembly language programs, ARM microcontrollers, and additional programming examples for 8051 in C language.
- Programming examples: Numerous additional solved examples for 8051 to aid in better understanding of the theory.

Praise for the First Edition

The many case studies, examples, diagrams, and flowcharts make this book an asset.

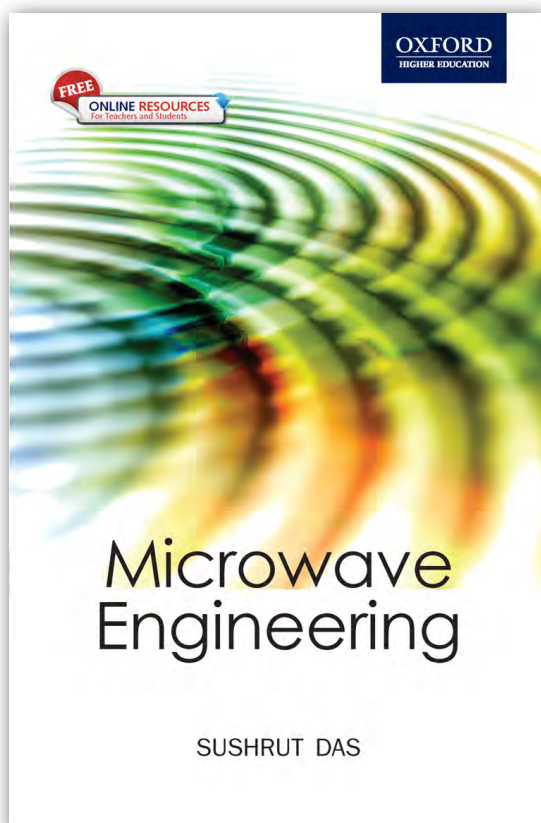
—Aditya Tah, Women's Polytechnic, Chandannagar

N. Senthil Kumar is Professor, Department of Electrical and Electronics Engineering, Mepco Schlenk Engineering College, Sivakasi, Tamil Nadu. He has more than 25 years of active teaching and research experience.

M. Saravanan is Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai, Tamil Nadu. He has more than 20 years of experience in teaching and research.

S. Jeevananthan is Professor, Department of Electrical and Electronics Engineering, Pondicherry Engineering College, Puducherry. He has more than 15 years of teaching experience.

eISBN: 9780199099016



Print ISBN: 9780198094746

Microwave Engineering

Microwave Engineering is a textbook designed for students of electronics and communication engineering for a course on radio frequency and microwave engineering. The text can also serve as reference material for postgraduate students. The book not only covers the basics of the subject, but also discusses its present trend and the latest developments.

The book covers in detail, topics such as transmission line, waveguides, microwave networks, passive and active devices (both solid state and vacuum), antenna, radar, microwave communication, as well as microwave measurements and radiation hazards.

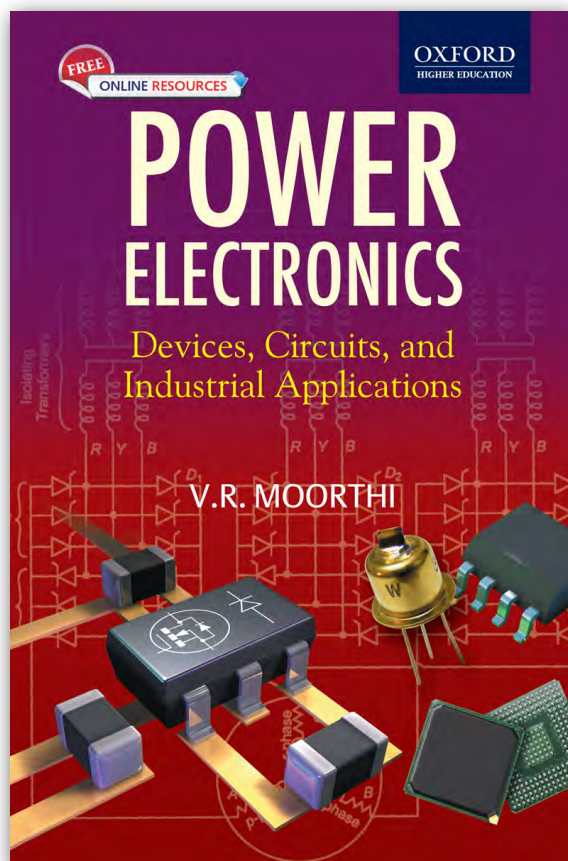
Key Features

- Provides a comprehensive coverage of topics including microwave antennas, radar, radiation hazards, and microwave measurements
- Includes well-labelled illustrations with a three-dimensional feel to help students visualize the concepts better
- Provides several solved examples, MATLAB programs, and practice problems
- Contains numerous multiple-choice questions, numerical problems (with hints and answers), review questions, and a recapitulation of key formulae
- Comprises three appendices on Wheeler's incremental inductance rule, ABCD parameters of different two-port networks, and the interrelation between different network parameters

Sushrut Das is Assistant Professor in the Department of Electronics Engineering, Indian School of Mines, Dhanbad. A PhD from IIT Kharagpur, he has published a large number of technical papers in reputed journals and conferences. He has been a part of different projects sponsored by the government of India.

Dr Das is also the recipient of the URSI (International Union of Radio Science) Young Scientist Award in Istanbul, Turkey. His areas of interest are electromagnetics, antennas, microwave circuits, numerical techniques in electromagnetics, and electromagnetic interference and compatibility. In addition, he is a member of the Institute of Electrical and Electronics Engineers (IEEE).

eISBN: 9780199090136



Print ISBN: 9780195670929

POWER ELECTRONICS

Power Electronics: Devices, Circuits, and Industrial Applications provides an exhaustive coverage of various power electronic devices, with emphasis on the thyristor. The characteristics of modern power semiconductor devices such as the power transistor, MOSFET, and IGBT are also discussed. Also covered in detail are controlled rectifiers, ac and dc drives, cycloconverters, brushless dc motors, microprocessor control of industrial equipment, and field oriented control of ac motors.

The book emphasizes the fundamental concepts with in-depth treatment of topics supplemented by a large number of worked examples. Written in a clear and lucid style, the book encourages self-study and motivates the student towards independent problem solving.

The book would serve as an invaluable text for undergraduate and postgraduate courses on power electronics and a useful reference for practising design engineers.

KEY FEATURES

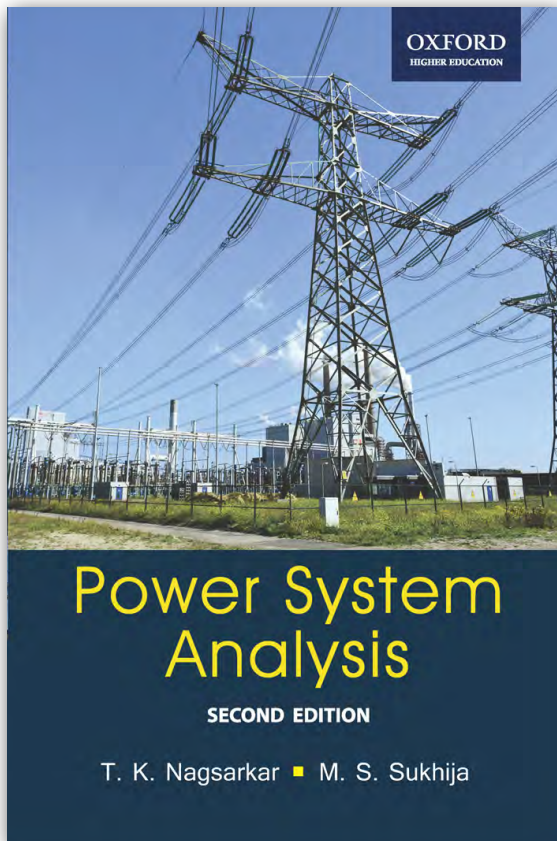
- Provides detailed and easy-to-understand derivations
- Includes detailed coverage of microcomputer control of industrial equipment
- Contains a separate chapter on industrial applications
- Includes a large number of illustrations, solved and unsolved problems, and review questions

Dr V.R. Moorthi, a PhD in Electrical Engineering from the Indian Institute of Technology Kanpur, has over 25 years of teaching experience both at the undergraduate and graduate levels and over 10 years of industry experience.

eISBN: 9780199099207



TOC list



Print ISBN: 9780198096337

Power System Analysis SECOND EDITION

The second edition of *Power System Analysis* serves as a basic text for undergraduate students of electrical engineering. It provides a thorough understanding of the basic principles and techniques of power system analysis as well as their application to real-world problems.

Beginning with the basic concepts, the book gives an exhaustive coverage of transmission line parameters, simulation of power system elements, steady-state performance and travelling wave phenomena on transmission lines, symmetrical and unsymmetrical fault analyses, power flow studies, power system control, and stability analysis. The book extensively illustrates the use of MATLAB in the analysis of power systems.

Owing to its lucid style and presentation of advanced topics, the book will be useful to postgraduate students as also to practising engineers.

New to the Second Edition

- Chapter on voltage stability
- Sections on magnetohydrodynamic generation, significance of propagation constant, Ferranti effect on transmission lines, DC power flow solution, and HVDC converter operation
- MCQs with answers to help students gauge their understanding of concepts explained in the chapter, and chapter-end summary and a list of significant formulae for a quick reference

Praise for the First Edition

The book is well organized. Authors should be appreciated for their effort in developing a large number of programs.

Dr Ch. Padmanabha Raju (PVP Siddhartha Institute of Technology, Vijayawada)

Logical build-up of concepts. Good number of illustrations.

Prof. Tanmoy Deb (KIIT, Gurgaon)

Key Features

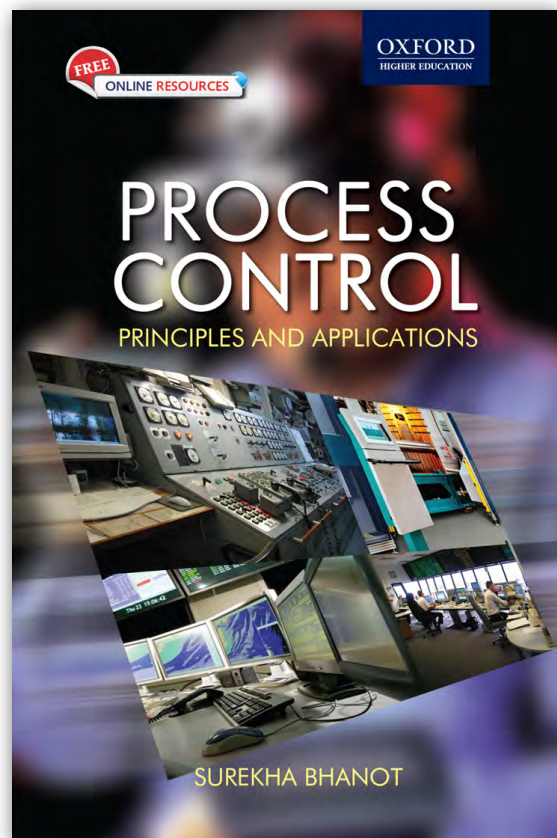
- Contains a large number of illustrative problems that use MATLAB in the analysis of power systems
- Includes advanced topics such as contingency analysis and state estimation
- Provides an introduction to HVDC and FACTS
- Includes numerous examples with step-by-step procedures and a variety of chapter-end problems

T.K. Nagsarkar has about 34 years of teaching experience and retired as Professor and Head, Department of Electrical Engineering, Punjab Engineering College.

M.S. Sukhija is the founder principal of Guru Nanak Dev Engineering College, Bidar, Karnataka. He has several years of experience teaching both undergraduate and postgraduate students.

This team has also authored *Basic Electrical Engineering 2e* (OUP, 2011), *Circuits and Networks: Analysis, Design, and Synthesis* (OUP, 2010), and *Basic Electrical and Electronic Engineering* (OUP, 2012).

eISBN: 9780199083411



Print ISBN: 9780195693348

PROCESS CONTROL PRINCIPLES AND APPLICATIONS

Process Control—Principles and Applications is specifically designed to serve as a basic text for undergraduate and postgraduate students of instrumentation engineering. It provides a thorough understanding of the basic principles and techniques used in analysis and design of process control.

Beginning with the basic concepts of process dynamics and mathematical modelling, the book gives an exhaustive coverage of theory of controllers, types of controllers, control valves, complex control systems, multiloop interactions, and computer-based control. It includes advanced topics such as PLC, distributed control, and SCADA. It also covers AI techniques such as expert systems, neural networks, and fuzzy logic.

Owing to its lucid style and presentation of advanced topics, the book will be equally useful to practising engineers, besides undergraduate and postgraduate students.

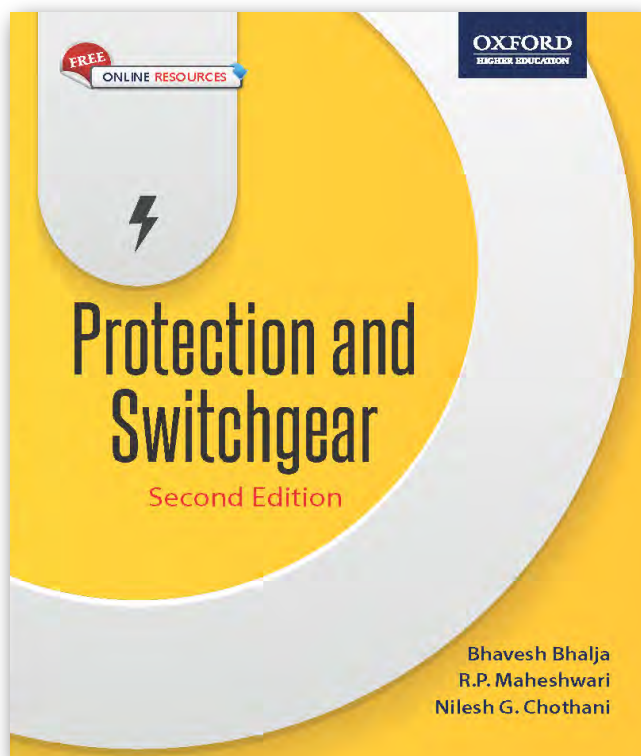
Key Features

- Presents the fundamental concepts in a student-friendly manner
- Includes numerous solved examples with step-by-step procedures
- Provides plenty of review questions and numerical problems to enhance understanding of key concepts
- Presents advanced topics such as Artificial Intelligence techniques related to process control

Surekha Bhanot is currently Professor, Department of Electrical and Electronics Engineering, BITS, Pilani. An M Phil in Instrumentation from BITS, Pilani and a Ph D from Roorkee University (now Indian Institute of Technology, Roorkee), she has 27 years of teaching experience.

Dr Bhanot has also guided many PhD students and has published many technical papers in national and international journals and conferences. She is a life member of the Indian Science Congress Association, the Indian Society for Technical Education, and the Instrument Society of India.

eISBN: 9780199090471



Print ISBN: 9780199470679

Protection and Switchgear Second Edition

Protection and Switchgear is designed as a textbook for undergraduate students of electrical and electronics engineering. The book aims at introducing students to the various abnormal operating conditions in power systems, system protection schemes, and the phenomenon of current interruption.

With the help of detailed relay and circuit diagrams, the book describes the protection principles of each element of the power system network including relay design and settings. It also covers digital/numerical relaying schemes, theories of the circuit breaking phenomenon, and the construction and working of switchgears.

Key Features

- Provides comparison of various distance relay characteristics, different types of circuit breakers and their selection.
- Includes a description of earthing transformer and frequency protection.
- Supports a large number of multiple choice questions especially for students/faculty and utility engineers.
- Includes numerous solved and unsolved examples in each chapter for practice and self-evaluation.
- Includes a case study on overcurrent relay coordination along with its source code.
- Supports PSCAD examples on inverters and converters which are extensively being used in the field.

New to the Second Edition

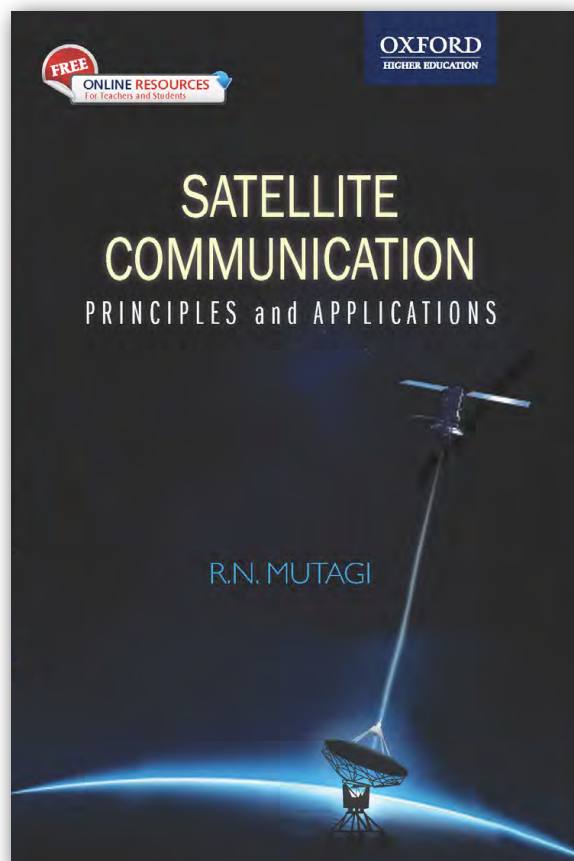
- Three new chapters—Chapter 18- Smart Grid Technologies and Applications, Chapter 19- Symmetrical and Unsymmetrical Faults in Power Systems, and Chapter 20- Basic Concept and Application of Controlled Switching.
- New sections on topics such as: numerical relays, static differential and static distance relays, types of digital filters, time grading and current grading of overcurrent relays, earthing transformer, comparison between impedance, reactance and mho relay, grid integration of renewable energy sources (res), selection of circuit breakers, phasor measurement unit, etc.
- Discussion on various technical challenges due to integration of renewable energy sources with the existing grid.
- As many as 120 Additional Multiple Choice Questions along with answers introduced as a separate section at the end of the book.
- MATLAB codes for LINKNET structure and primary back-up relay pairs.

Bhavesh Bhalja is Associate Professor, Department of Electrical Engineering, Indian Institute of Technology Roorkee.

R.P. Maheshwari is Professor, Department of Electrical Engineering, Indian Institute of Technology Roorkee.

Nilesh G. Chothani is Associate Professor, Department of Electrical Engineering, A. D. Patel Institute of Technology, Gujarat.

eISBN: 9780199098897



Print ISBN: 9780199452804

SATELLITE COMMUNICATION

PRINCIPLES and APPLICATIONS

Satellite Communication: Principles and Applications is designed to serve as a textbook for undergraduate and graduate students of Electronics and Communication Engineering. The practical problems derived from real experimental data make this book a handy reference for practicing engineers as well.

As the title suggests, the book covers the fundamentals of satellite communication and its applications. The principles of satellite communication include satellite, earth stations, the Earth-satellite link, access methods, and communication techniques employed. The traditional, recent, and modern applications are elaborated. Also, in the last two chapters, the future trends in satellite systems are discussed adequately.

The book provides a number of solved examples with step-by-step procedure for solving, numerous multiple choice questions, numerical problems, and practice exercises.

Key Features

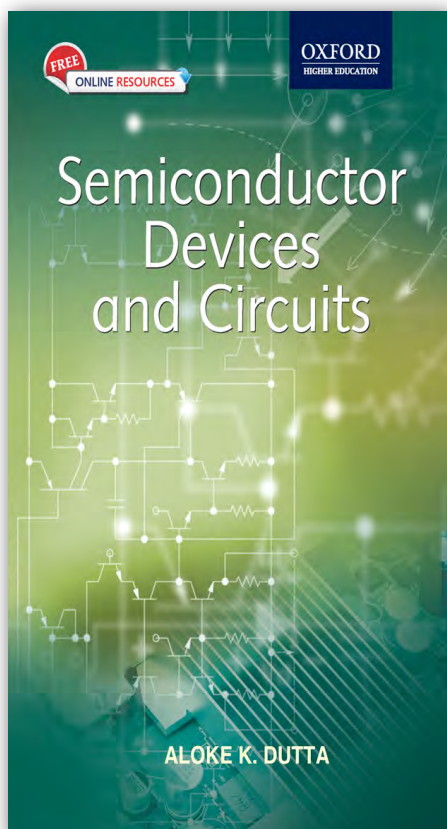
- Includes an exclusive chapter on Earth Station Technology
- Elaborates upon special techniques such as digital speech interpolation and echo cancellation, unique to satellite communication
- Presents case studies discussing recent Indian space missions such as Chandrayaan-1 and Mars Orbiter Mission
- Describes applications with the current standard systems

R.N. Mutagi is currently Professor and Head, Electronics and Communication Engineering, Indus Institute of Technology and Engineering, Ahmedabad. Formerly, he worked on satellite communication systems at ISRO and a visiting faculty to many reputed institutes. He holds 40 years of international work and teaching experience in the area of satellite communication and has presented numerous scientific papers in India and abroad. He is the author of *Digital Communication, Theory, Techniques, and Applications*, 2e [OUP, 2013].

eISBN: 9780199099085



TOC list



Print ISBN: 9780195676877

Semiconductor Devices and Circuits

Semiconductor Devices and Circuits is designed as a textbook for undergraduate students of Electrical and Electronics Engineering. It gives in detail the basic concepts and theories of both semiconductor and device physics and analog electronic circuits.

The book is divided into two parts. Part I—Semiconductor Devices—provides an exhaustive coverage of all important topics such as crystal structures, fabrication technology, basic semiconductor physics, excess carriers and transport processes, junction diodes, bipolar junction transistors, MOS capacitors, and field-effect transistors (both JFETs and MOSFETs). Part II—Analog Circuits—deals with topics such as biasing, amplifiers, output stages, frequency response, feedback, stability, compensation, operational amplifiers, and oscillators.

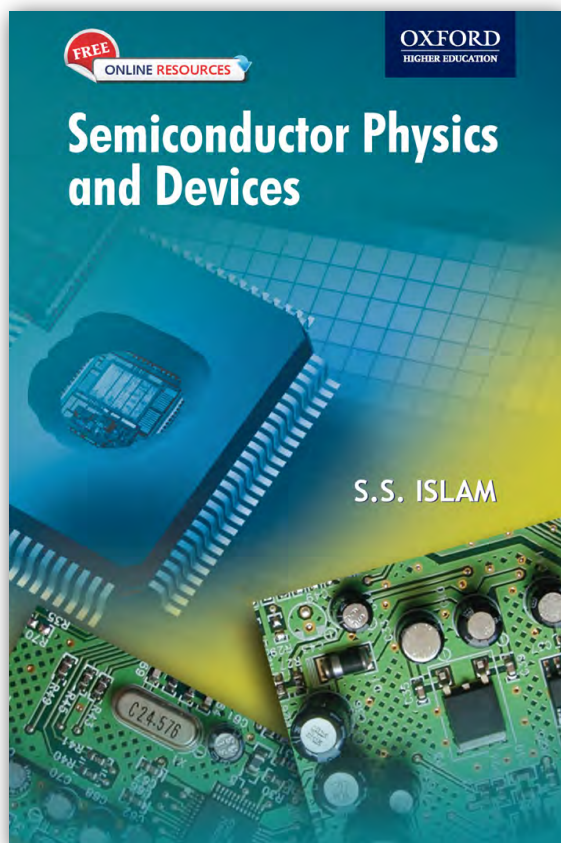
Written in a lucid and student-friendly style, each chapter starts with the fundamental concepts and gradually dwells on more advanced concepts with the help of detailed explanations and illustrations. Numerous solved examples in each chapter expose the students to the problem solving techniques, and the practice problems at the end of each chapter challenge readers to test their understanding of the concepts.

Key Features

- Presents a strong and well-balanced combination of semiconductor physics, devices, and analog circuits
- Up-to-date and detailed coverage of MOSFETs and operational amplifiers
- Includes numerous practice problems and solved examples

Aloke K. Dutta is currently Professor, Department of Electrical Engineering, Indian Institute of Technology Kanpur. He obtained his BE in Electrical Engineering (Gold Medalist) from Jadavpur University, Kolkata, and MS and PhD from Louisiana State University. Prof. Dutta has about 18 years of teaching experience and has published several research papers in international journals.

eISBN: 9780199083404



Print ISBN: 9780195677294

Semiconductor Physics and Devices

Semiconductor Physics and Devices provides an introduction to the physics of semiconductor materials and devices. Beginning with the basic physics, the first part of the book gives a comprehensive coverage of semiconductor fundamentals and discusses the recent developments in the field. The second part covers in detail the characteristics, operation, and limitations of solid-state electronic devices such as junction diodes, BJTs, and state-of-the-art FETs such as MESFETs, HEMTs, and MOSFETs. The book ends with a discussion on optoelectronic, microwave, and power electronic devices.

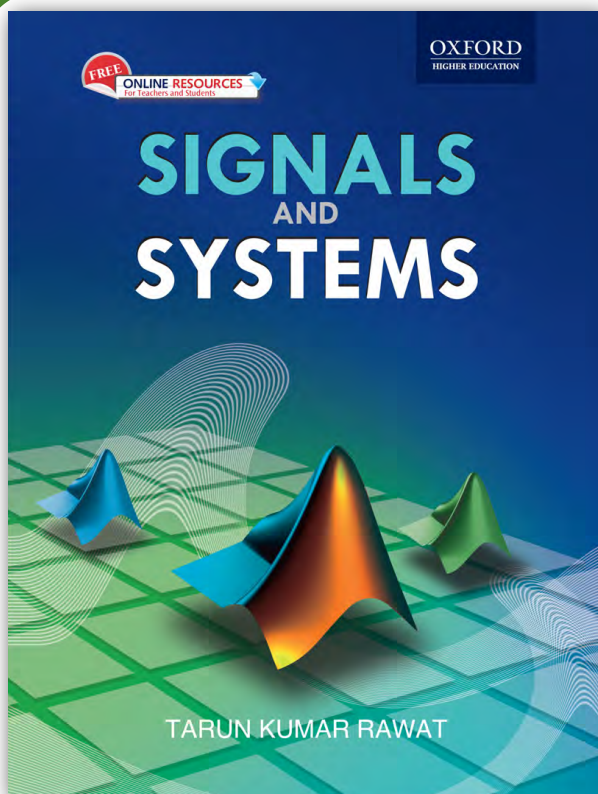
Written in a lucid style, this student-friendly book is intended for undergraduate students of engineering. It would also suit the requirements of undergraduate and postgraduate students of science and electronics. With the inclusion of some new topics covering recent advances in the field, the book would be a useful reference for practising engineers and scientists.

Key Features

- Facilitates insight into the working of traditional as well as modern semiconductor devices
- Presents experimental techniques for semiconductor processing and characterization
- Covers the latest trends in areas such as heavily doped semiconductors, bandgap engineering, and high-electron-mobility transistors
- Includes a large number of worked-out examples as well as chapter-end problems with answers to test the application of the basic concepts

S.S. Islam is currently Head, Department of Applied Sciences & Humanities, and Coordinator of the M.Sc. electronics programme, Faculty of Engineering & Technology, Jamia Millia Islamia (Central University), New Delhi. A PhD in material science from the University of Paris, France, he has over 17 years of teaching and research experience. He has contributed several research papers to international journals and has guided many PhD scholars. His research interests include spectroscopic investigation of semiconductor quantum structures and high-speed nano-devices.

eISBN: 9780199083343



Print ISBN: 9780198066798

SIGNALS AND SYSTEMS

Signals and Systems is a comprehensive textbook designed for undergraduate students of engineering for a course on signals and systems. Each topic is explained lucidly by introducing the concepts first through abstract mathematical reasoning and illustrations, and then through solved examples.

The book provides a simultaneous coverage of continuous-time and discrete-time signals and systems. Beginning with classifying signals, the book sequentially covers important topics such as convolution and correlation of signals, continuous-time Fourier series, discrete-time Fourier series, continuous-time Fourier transform, sampling, Hilbert transform, Laplace transform, and z-transform. A chapter on MATLAB programs presenting the applicability of the software to problems of signals and systems has also been included at the end of the book.

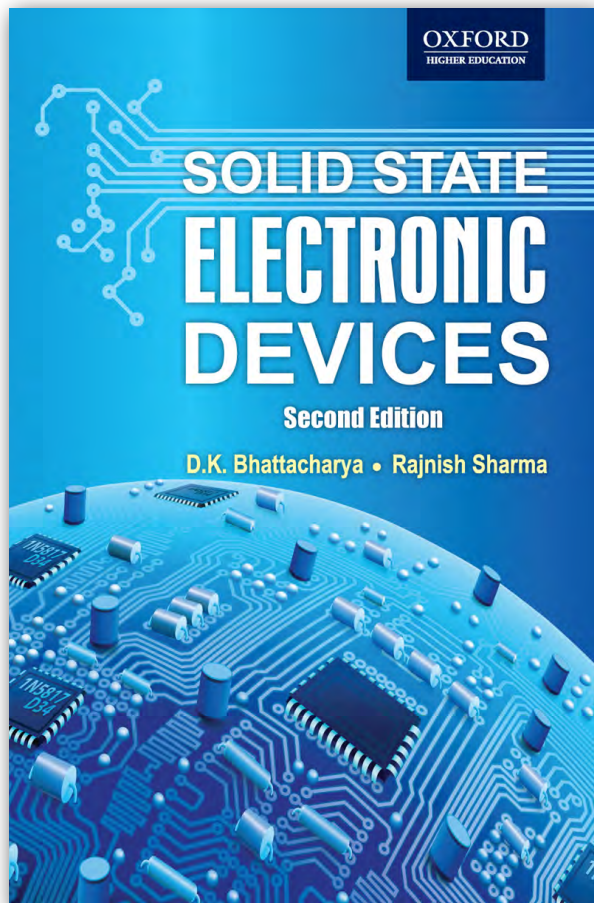
Key Features

- Contains more than 500 solved examples along with numerous multiple-choice questions and numerical problems
- Includes a separate chapter on Hilbert transform including the concept of pre-envelope and complex envelope
- Provides appendices containing mathematical relations, complex numbers, and partial fraction expansion
- Contains model question papers for practice

Tarun Kumar Rawat is a faculty in the Department of Electronics and Communication Engineering, Netaji Subhas Institute of Technology (NSIT), Delhi. He has completed his M Tech and PhD from the University of Delhi in the area of signal processing.

Dr Rawat's teaching and research interests are in the areas of circuits and systems, digital signal processing, statistical signal processing, stochastic nonlinear filters, and digital communication. He has published several papers in various international journals of repute. He is a member of IETE and a life member of ISTE.

eISBN: 9780199083336



Print ISBN: 9780198084570

SOLID STATE ELECTRONIC DEVICES Second Edition

The second edition of **Solid State Electronic Devices** serves as a textbook for an introductory course on solid state electronic devices. It provides a comprehensive coverage of the fundamental concepts of the subject that will be useful to undergraduate and polytechnic students as well as practising engineers.

The book begins with basic solid state topics such as electron dynamics, growth and crystal properties of semiconductors, energy bands, and excess carriers in semiconductors, and then moves on to the study of p-n junctions, bipolar junction transistors, and field-effect transistors. This is followed by an analysis of special devices such as opto-electronic devices, power devices, and microwave devices. Finally, the text covers integrated circuits, micro-electromechanical systems, rectifiers, and power supplies.

Key Features

- Provides a thorough understanding of the basic principles of solid state physics which forms the basis of semiconductor device design
- Elucidates the working of traditional as well as modern semiconductor devices
- Includes pedagogical features such as review questions, solved problems, chapter-end review exercises, and a recapitulation of the topics covered
- Includes appendices containing important physical and lattice constants, international system of units, and important properties of semiconductors

New to the Second Edition

- New sections such as reciprocal lattice, band structure modification, electrons and holes in quantum wells, Early effect, short channel MOSFET I-V characteristics, and photoluminescence and electroluminescence
- Detailed explanations and coverage
- Additional illustrations

Praise for the First Edition

The book seems to be very good for the Device Physics. In general, the book is written and organized well for the device course.

— Dr. P.C. Srivastava (Banaras Hindu University)
Chapters are well written. Good for undergraduate level.

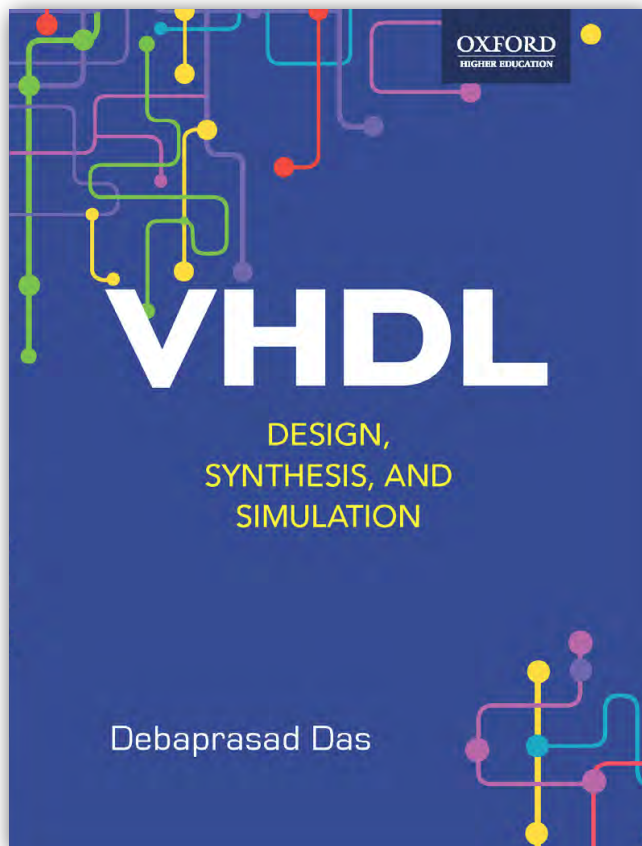
— Dr. Udai P. Singh, Prof. (KIIT University)

D.K. Bhattacharya currently heads the Ion Implantation Group, Microwave and Instrumentation Group, Hydrophone Group and Quality Promotion Group at the Solid State Physics Laboratory, New Delhi.

Rajnish Sharma is Dean (Academics), School of Engineering and Technology at Chitkara University, Himachal Pradesh.

eISBN: 9780199083329

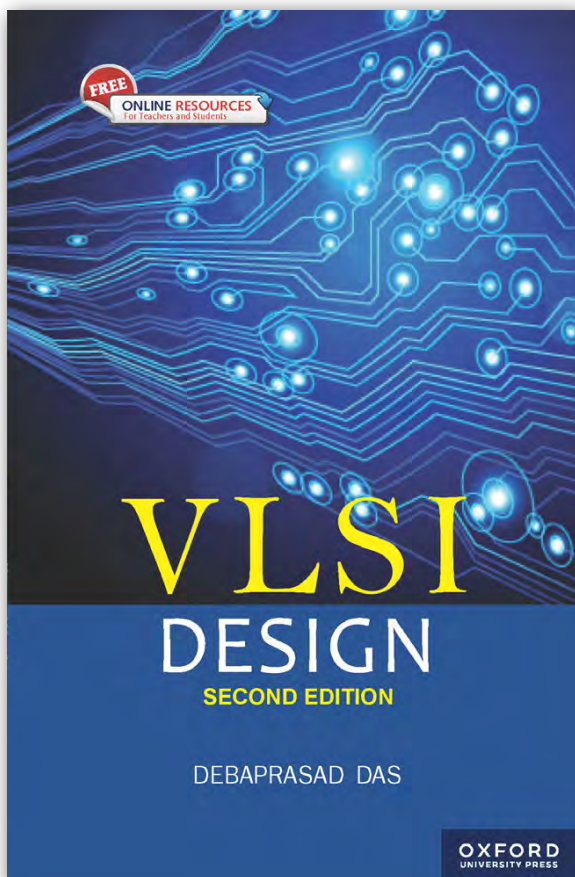




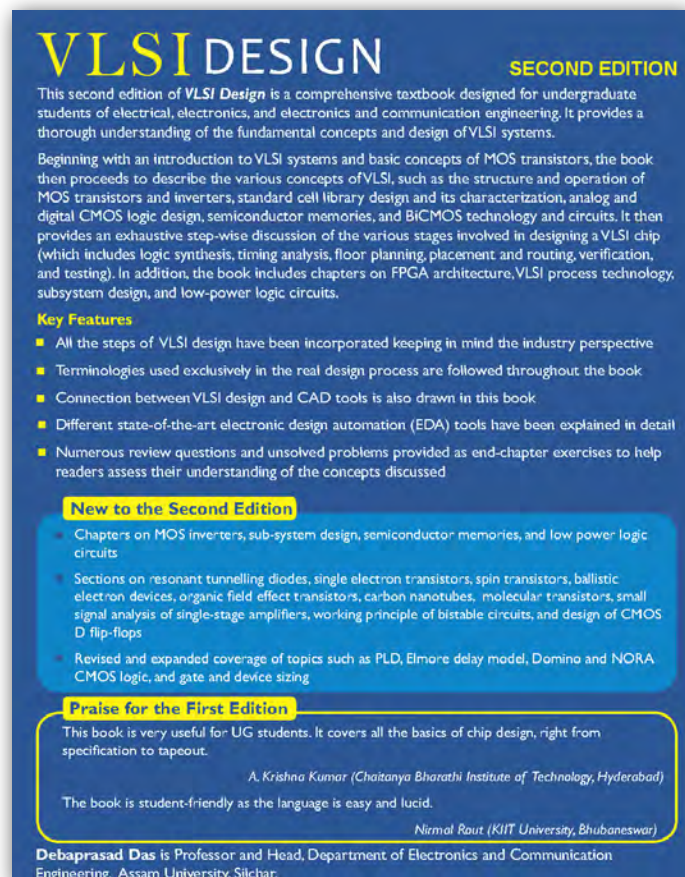
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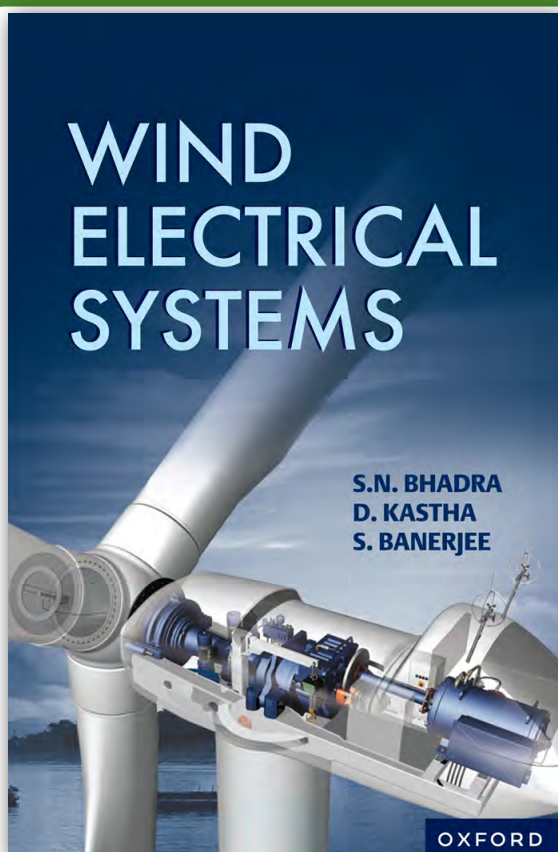
eISBN: 9780199094547



Print ISBN: 9780198094869



eISBN: 9780199099139



Print ISBN: 9780195670936

WIND ELECTRICAL SYSTEMS

Wind Electrical Systems provides an integrated and comprehensive treatment of wind energy conversion without assuming any background of the subject.

Beginning with the basics of wind energy, the book goes on to discuss conversion of wind energy into electrical energy, wind energy integration with the local grid, stand-alone generation and consumption, and variable-speed wind generators. The book ends with a discussion of hybrid power systems where wind energy is integrated with another energy source such as solar energy or diesel generators to provide reliable power.

With its wide inter-disciplinary coverage, the book would serve as an indispensable text for students of electrical, mechanical, and energy engineering as well as practising engineers.

KEY FEATURES

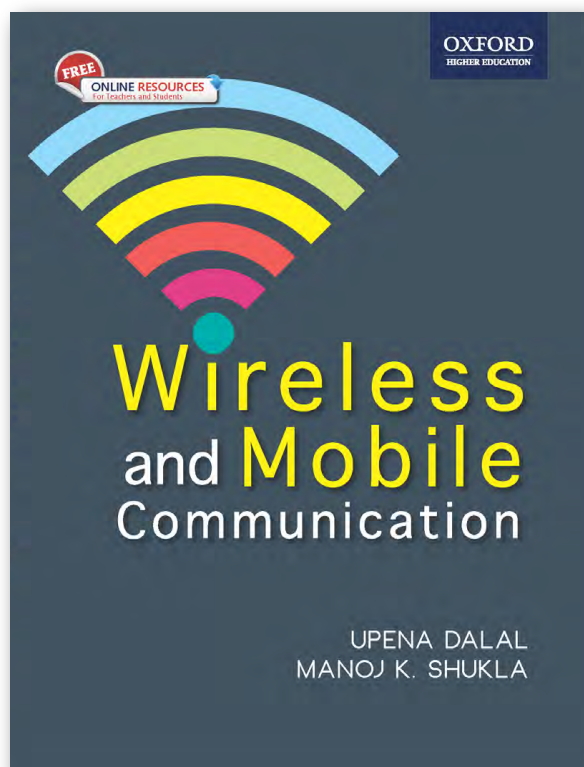
- Incorporates contemporary analytical methods to study the steady state as well as dynamic behaviour of wind electrical systems
- Includes recent developments in the area such as variable-speed, constant-frequency systems based on cage rotor and wound rotor induction machines, permanent magnet machines, and hybrid systems
- Contains a large number of worked examples and exercise problems

S.N. Bhadra is currently Professor of Electrical Engineering at the College of Engineering and Management, Kolaghat, West Bengal. He has over 38 years of teaching experience at the Indian Institute of Technology (IIT) Kharagpur. His areas of interest include modelling and simulation of electrical machines, application of power electronics to electrical drives, and wind power generators.

D. Kastha, a PhD from the University of Tennessee at Knoxville, USA, has been teaching at IIT Kharagpur for over ten years. His area of specialization is power electronics.

S. Banerjee has been teaching energy engineering at IIT Kharagpur for over 20 years. A senior member of the Institute of Electrical and Electronics Engineers (IEEE), he has a large number of publications to his credit. He has received the Shanti Swarup Bhatnagar Award for his research on non-linear dynamics.

eISBN: 9780199083398



Print ISBN: 9780199475001

Wireless and Mobile Communication

Wireless and Mobile Communication is a textbook primarily designed for undergraduate students of electronics and communication engineering as well as computer science and engineering for the related course.

The book is divided into four parts which represent the four important aspects of practical wireless systems—Wireless Communication Prerequisites, Wireless Channels and Modelling, Wireless Communication Techniques, and Wireless Networks. Each chapter begins with a theme and key topics and gradually explores concepts through detailed explanations and illustrations.

Elucidating theory through a variety of solved examples, the book also provides review questions, multiple-choice questions, and numerical exercises.

Key Features

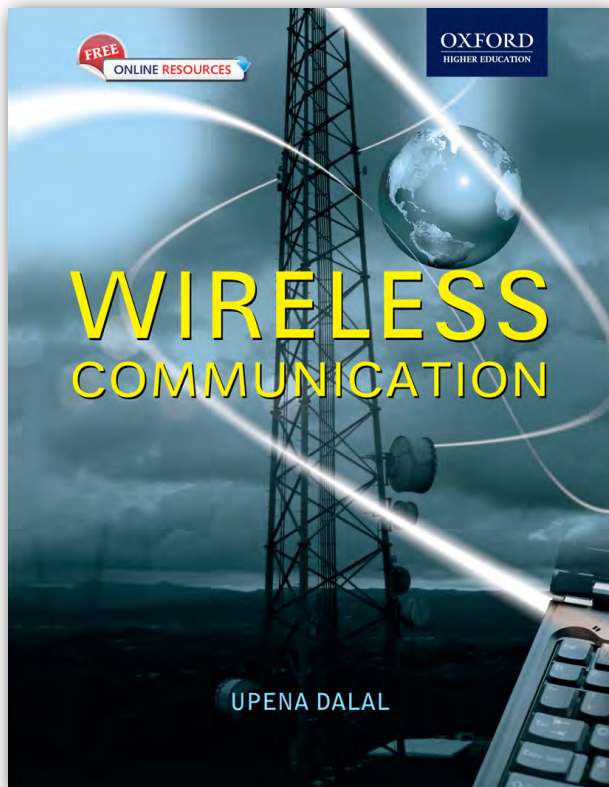
- Lays emphasis on wireless digital communication techniques along with signal processing signal processing and system level aspects
- Contains solved examples and case studies to support the theoretical concepts covered in the chapters
- Includes discussion of IDMA, Interleaver, Li-Fi, SC-FDMA, Zero forcing equalizer, and underwater communication modelling
- Presents a detailed treatment of Next Generation Network (NGN)

Upena Dalal is currently Associate Professor, Department of Electronics Engineering, Sardar Vallabhbhai National Institute of Technology, Surat.

Manoj K. Shukla is Professor, Department of Electronics Engineering, Harcourt Butler Technical University, Kanpur.

eISBN: 9780199090570





Print ISBN: 9780198060666

WIRELESS COMMUNICATION

Wireless Communication is designed to serve as a textbook for students of electronics and communication engineering. It provides an exhaustive coverage of the basic topics and the latest developments in the field of wireless communication.

Beginning with an overview of the current scenario in the study of wireless systems, the book discusses the fundamental concepts of wireless communication, digital signal processing (DSP), digital communication, and information theory in the earlier chapters. It goes on to discuss wireless channel and modulation schemes with multiple access scenarios in the intermediate chapters and advanced wireless systems at the end. Each block of wireless link has been dealt with in sufficient detail, including source coding and channel coding methods, radio wave propagation over wireless channels, and single-carrier and multicarrier modulation techniques. Advanced topics, such as turbo coding, spread spectrum communication, OFDM, MIMO, and software radio, make the book complete in all respects. All the chapters start with the simpler topics and gradually build up the advanced concepts through detailed explanations and illustrations.

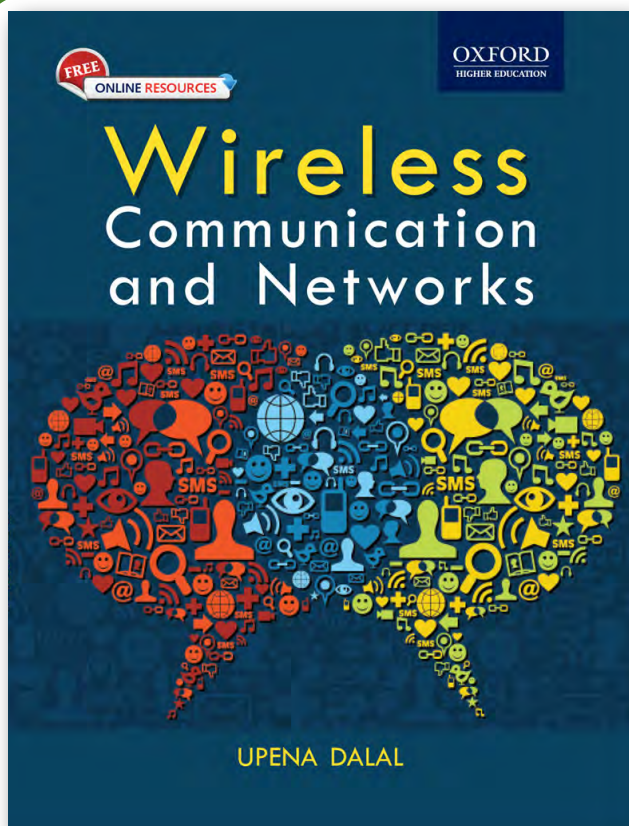
The chapters have a rich pedagogy consisting of over 400 self-explanatory figures and numerous chapter-end exercises that will help students revise the concepts through visualization and practice. Owing to its comprehensive coverage of all the relevant topics, including the upcoming areas of wireless communication, the book will also be useful for postgraduate students and practising engineers in the field.

Key Features

- Lays emphasis on digital communication and associated DSP
- Contains the latest coding techniques, such as the wavelet and DCT, as well as the most recent standards and systems, such as DAB, DVB, WiMAX, and UWB
- Contains solved examples and case studies to reinforce the textual concepts discussed in the chapters
- Includes chapter-end review questions, numerical problems, and multiple choice questions for practice
- Includes model question papers for self-practice

Upena Dalal is currently a faculty member in the Department of Electronics Engineering, Sardar Vallabhbhai National Institute of Technology, Surat. A gold medalist in ME and a member of professional bodies like IE, IETE, ISTE, IEEE, and IJERIA, she has 17 years of teaching experience. She is also a recipient of the fifth IETE N.V. Gadadhar award and the Laxminarayan Kalla award from D.D. University, Nadiad.

eISBN: 9780199083350



Print ISBN: 9780198098881

Wireless Communication and Networks

Wireless Communication and Networks is designed as a textbook for students of electronics and communication engineering, as well as computer engineering. The book provides a detailed and holistic coverage of the various aspects and technologies of wireless systems, in addition to the emerging systems and standards.

Divided into four parts, the book provides exhaustive coverage, from fundamental concepts of wireless communication to the latest developments in the field. Beginning with an overview of basic terminologies and principles of wireless communication, Part I discusses cellular theory, which forms the basis for wireless systems. Part II describes the basic characteristics of the wireless channel, impairments and mitigation techniques, and channel modelling. Part III explains source coding and channel coding techniques, single- and multi-carrier digital modulation schemes, diversity techniques, equalization methods, and multiple access techniques. The last part of the book talks about networking fundamentals, cellular networks, and ad hoc wireless networks.

Owing to its comprehensive coverage of all the relevant topics, including the upcoming areas of wireless communication, the book will also be useful for postgraduate students and practising engineers in this field.

Key Features

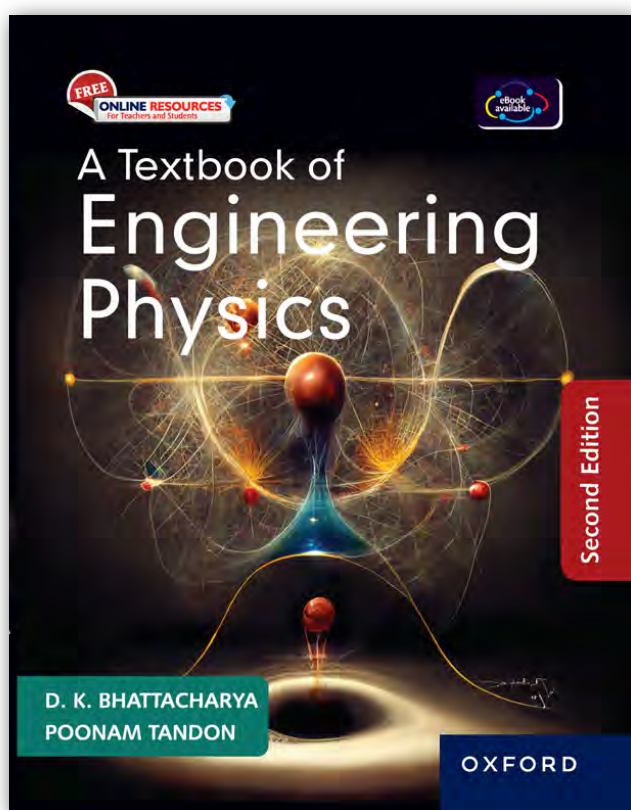
- Lays emphasis on wireless digital communication techniques along with signal processing aspects and system level aspects
- Contains the latest coding techniques, including turbo coding as well as important wideband modulation techniques such as spread spectrum and OFDM
- Introduces the latest standards such as UMTS, LTE, and WiMAX along with well-established systems and associated standards
- Discusses channel modelling from the perspective of signal processing and statistical methods
- Contains solved examples and case studies to reinforce the theoretical concepts covered in the chapters

Upena Dalal is currently Associate Professor and Head of the Department of Electronics Engineering, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat. A gold medalist in ME, a PhD from SVNIT, and a member of professional bodies such as IE, IETE, ISTE, IEEE, and IJERIA, she has more than 23 years of teaching experience.

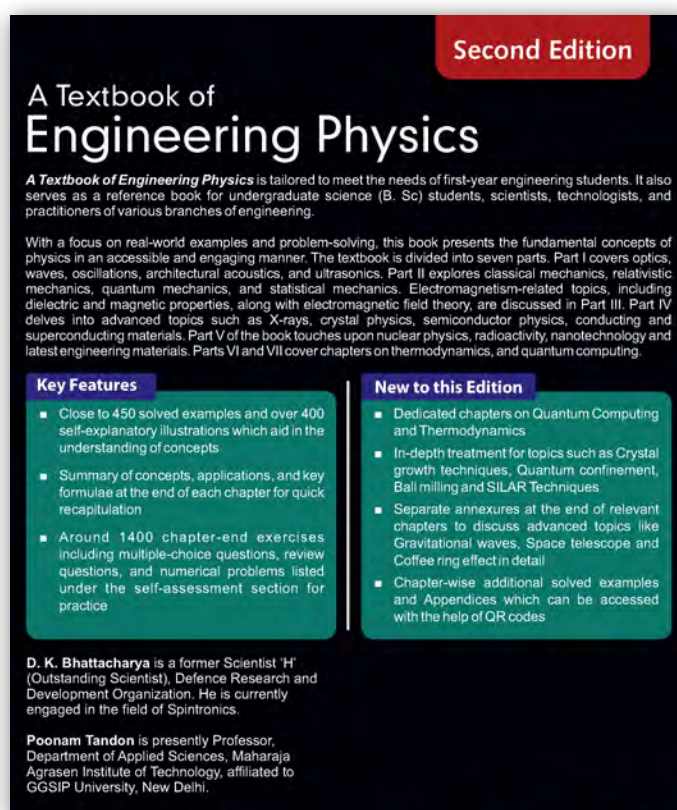
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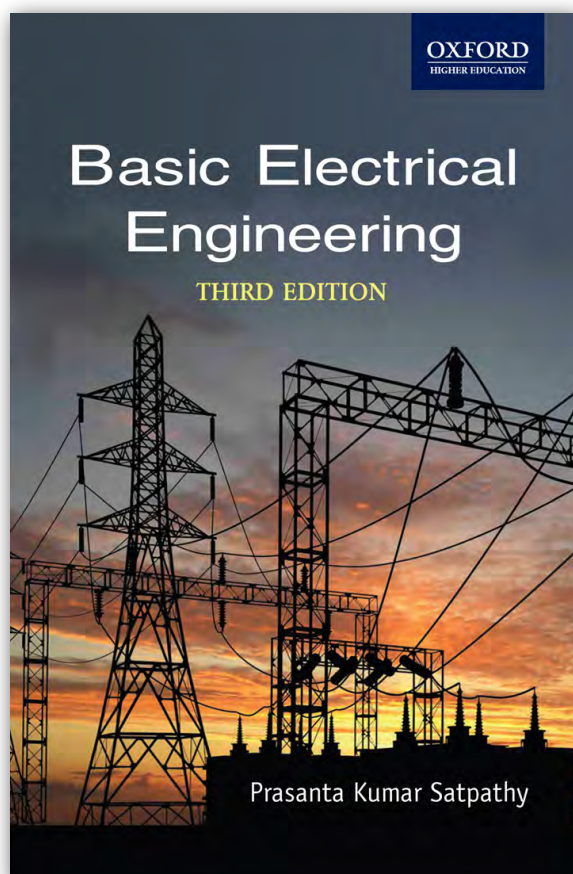
ENGINEERING FIRST YEAR



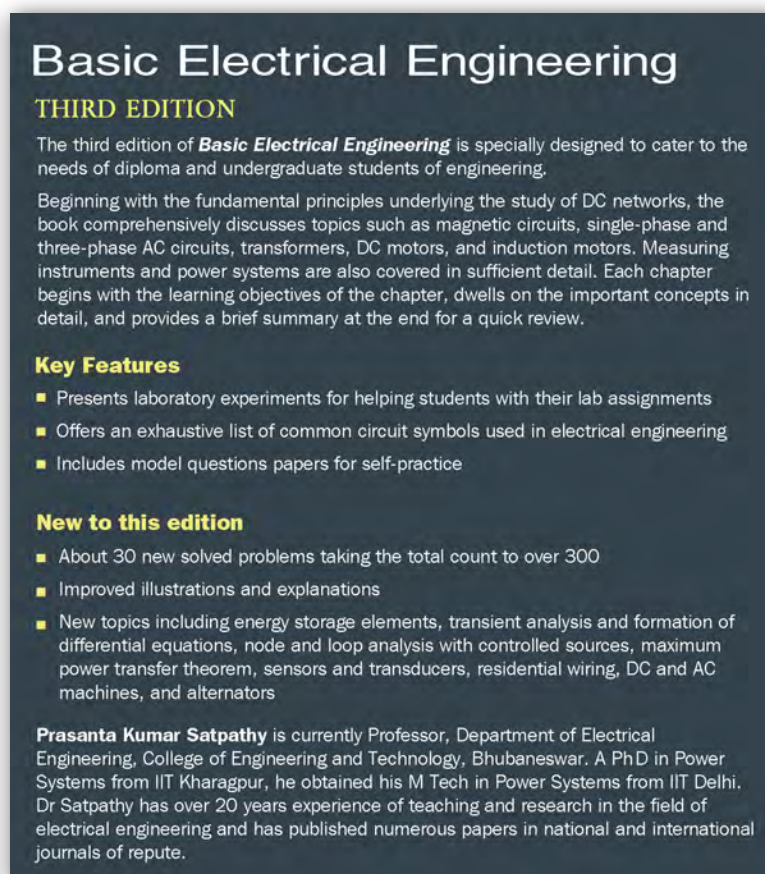
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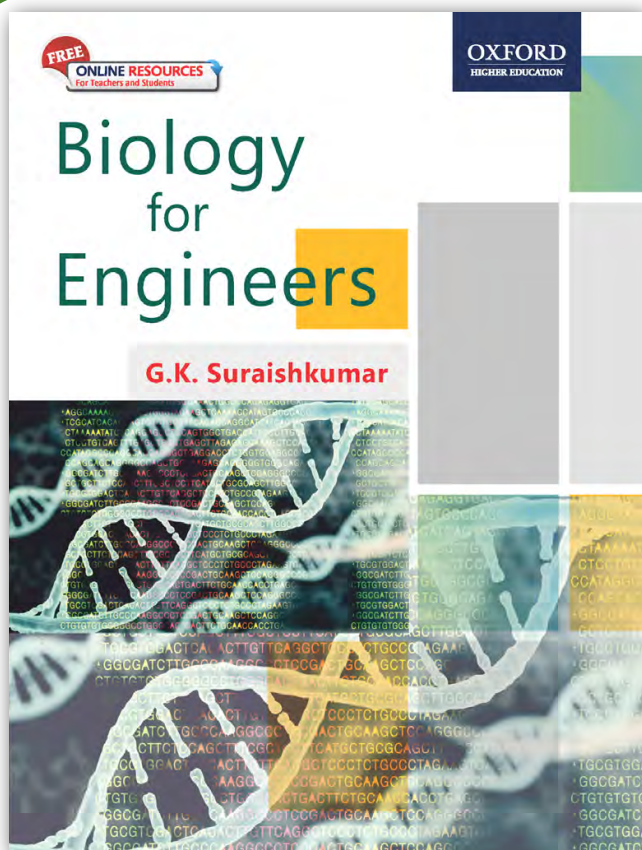


Print ISBN: 9780198075097



eISBN: 9780199083480





Print ISBN: 9780199498741

Biology for Engineers

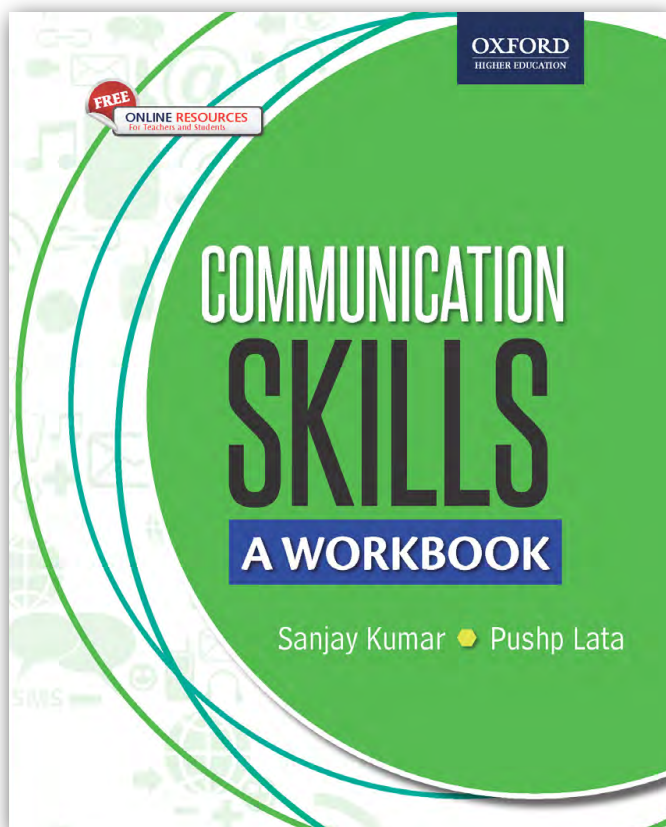
Biology for Engineers is a textbook designed to address the first year interdisciplinary course on the subject for undergraduate engineering students. It is written in a unique style to stimulate interest among students of varied academic streams of engineering to provide an exposure to the fundamentals of biology. Organised into 11 chapters, the book begins with the discussion of the significance of biology in the engineering context and moves onto the basics of origin of life followed by a brief account on evolution. Concepts of cell biology are discussed in detail spread over four exclusive chapters. This is followed by chapters on DNA and cell replication and quantification. The last few chapters discuss proteins, Mendelian genetics, and cellular organelles before concluding with the chapter on human physiology.

Key Features

- Adopts a **narrative presentation** to ensure ease of learning for students from varied engineering streams
- Provides **reflection points** interspersed in every chapter to kindle further interest in the students' mind
- Includes **additional information** at the end of each chapter to encourage deeper and wider learning
- Provides chapter-end **multiple-choice questions (MCQs)** for summative assessment of learnt concepts
- Includes **glossary of key terms**
- Contains **appendices** discussing topics, such as Gram Staining, Glycolysis, Derivation of the Michaelis-Menten equation, and Genetic Modification

G.K. Suraishkumar is Professor, Dept of Biotechnology, Bhupat and Jyoti Mehta School of Biosciences Building, Indian Institute of Technology Madras, Chennai. He has been at IITM as a Professor since May 2004, and was earlier a faculty member in the Department of Chemical Engineering at the Indian Institute of Technology Bombay (IITB). He was also an Associate Faculty member in the erstwhile Centre for Biotechnology, which is now the Department of Biosciences and Bioengineering, at IIT-Bombay, between 1995 and 2004. A Ph.D. from Drexel University, Philadelphia, he did his masters at the University of Cincinnati.

eISBN: 9780190992200



Print ISBN: 9780199488803

Communication Skills

A WORKBOOK

Communication Skills: A Workbook is a practice book designed to help users to develop the four fundamental language skills—Listening, Speaking, Reading, and Writing (LSRW).

Divided into four parts, Unit I focuses on non-verbal communication, grammar and usage, vocabulary enhancement, and listening skills. The book goes on to cover reading comprehension in Unit II. Unit III on writing skills concentrates on emails, blogs, business letters, and job application letters among others. Unit IV focuses on speaking skills that will help in role play and dialogues, professional presentations, speeches, debates, group discussions, and job interviews.

Drafted for students at the graduation level, the text would prove equally useful for students pursuing their postgraduation or professionals aspiring to enhance their proficiency in English.

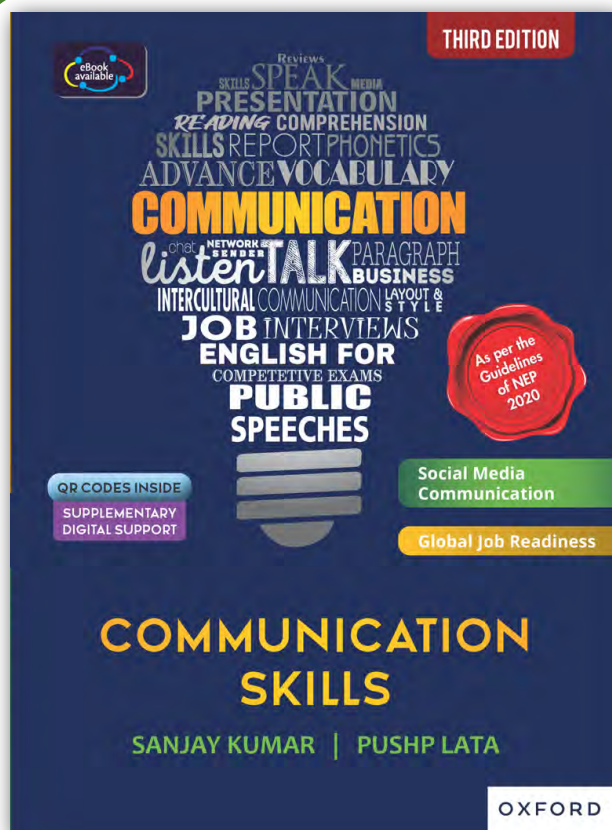
Key Features

- Innovatively-designed text and examples to help students excel in grammar, vocabulary, listening, reading, writing, and speaking
- Numerous practice exercises for self-assessment in all chapters
- Enhances employability by providing practical insights to help readers face interviews and group discussions, participate in debates, or appear for competitive examinations

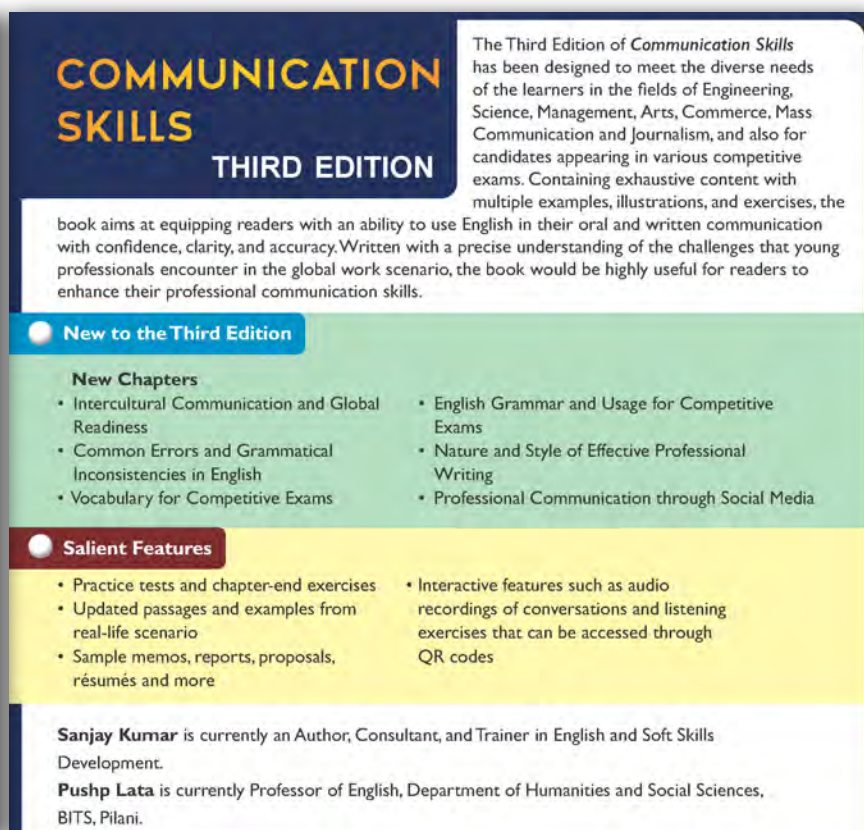
Sanjay Kumar is a Consultant in the field of Communication and Soft Skills.

Pushp Lata is currently Associate Professor of English at the Department of Humanities and Social Sciences, BITS, Pilani.

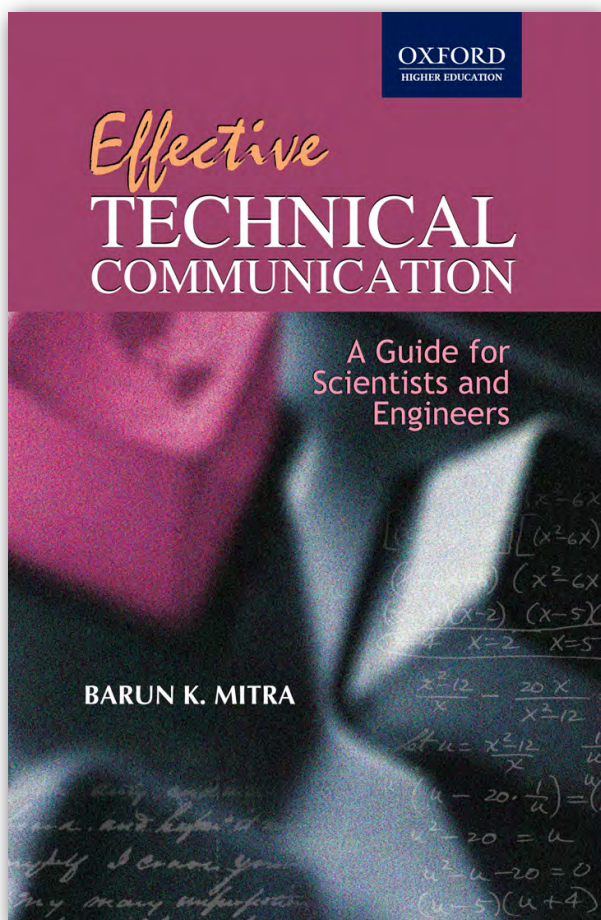
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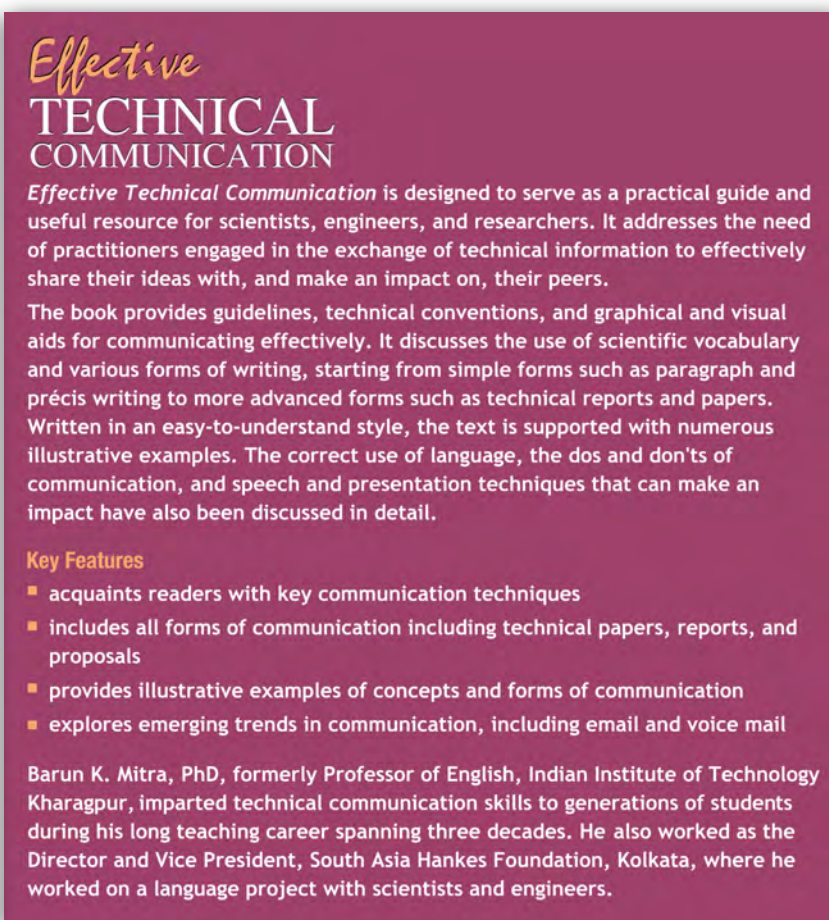
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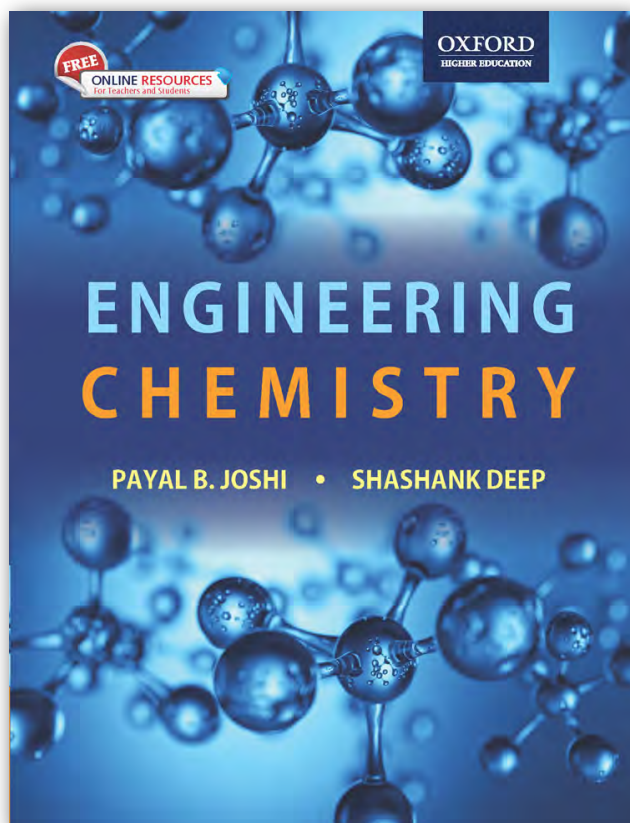
Print ISBN: 9780195682915



eISBN: 9780199085026



TOC list



ENGINEERING CHEMISTRY

Engineering Chemistry is designed as a textbook for undergraduate engineering students. The book covers the revised AICTE syllabus and also fulfils the syllabus requirements of universities across India. Divided into two parts, the book provides a comprehensive discussion of all relevant and important topics related to basic and applied chemistry.

The book is divided into two parts: **Part 1 Basic Chemistry** covers core chemistry topics in 12 chapters and includes chapters on atomic and molecular structure, periodic properties, thermodynamics, chemical equilibrium, and phase rule; **Part 2 Applied Chemistry** includes topics such as water chemistry, corrosion, metals and alloys, polymers, engineering materials, and green chemistry.

Key Features

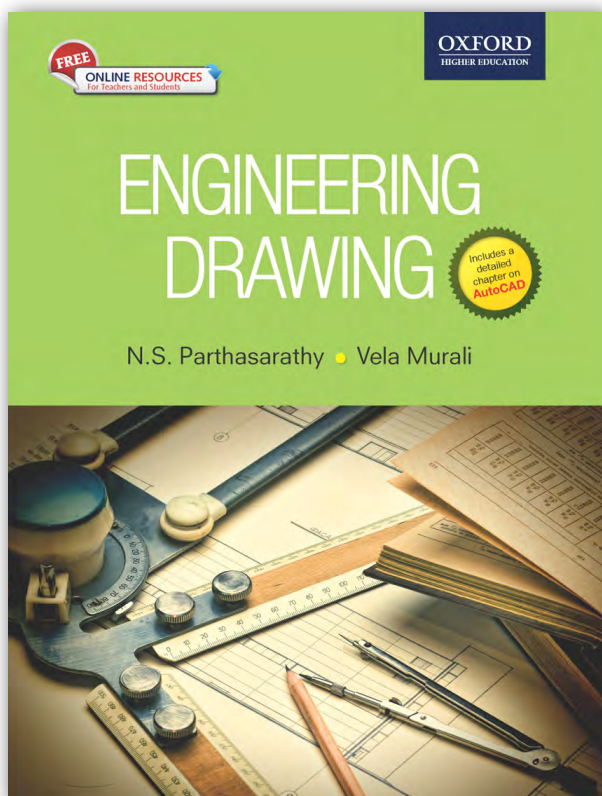
- Presents the concepts in an easy-to-understand manner with several self-explanatory illustrations and tables
- Includes simple as well as advanced solved numerical problems and Check Your Progress questions and answers interspersed in the text
- Provides activity-based questions enabling the application of concepts in the real world
- Includes point-wise summary and glossary of key terms and key formulae at the end of each chapter to help recapitulate
- Provides numerous multiple choice questions, review questions, and numerical problems for practice in each chapter
- Includes an appendix comprising laboratory experiments as per the new AICTE curriculum

Payal B. Joshi is Assistant Professor, Department of Basic Science & Humanities at SVKM's NMIMS, Mukesh Patel School of Technology Management and Engineering, Mumbai. She has more than a decade's experience in teaching and research. Dr Joshi has published more than ten research and review papers in reputed national and international journals.

Shashank Deep is Associate Professor, Department of Chemistry, IIT Delhi. Dr Deep has authored several research publications in national and international journals of repute including *Nature*, *Structural Biology*, *Biochemistry*, and *Journal of Molecular Biology*. He has guided several PhD and MTech students.

Print ISBN: 9780199496662

eISBN: 9780190992255



ENGINEERING DRAWING

Engineering Drawing is a textbook designed for the students of all engineering disciplines to develop a spatial bent of mind to observe, visualize, and understand the structure of objects from different perspectives. This ability forms the central idea of design and development of all engineering products.

Beginning with the basics, such as BIS conventions, geometrical constructions, and scales, the book presents a detailed chapter on Visualization Concepts and Freehand Sketching, which lays the foundation to understand the subsequent chapters on orthographic projections, projection of points, lines, planes, and solids. These chapters ease the complexity of understanding further chapters such as intersection of solids, surfaces, and development of surfaces. The last few chapters discuss isometric projections, transformation of projections, perspective projections, and finally computer-aided drafting that briefs the reader about the utility of AutoCAD 2015 tools in drawing.

The book provides a number of example problems with step-by-step procedure for solutions, numerous graded practice exercises, and multiple-choice questions.

Key Features

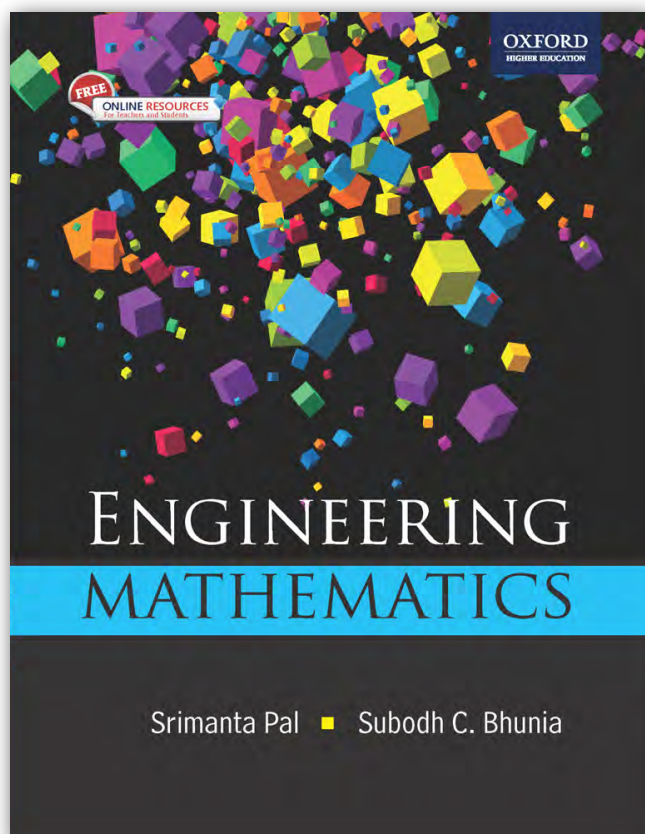
- Presents a detailed chapter on Visualization Concepts and Freehand Sketching with a number of examples and exercises
- Includes over 450 illustrative examples, several multiple-choice questions, and work practice problems divided into multiple levels
- Adopts a step-by-step solution procedure to all problems along with the development of the drawing
- Provides relevant engineering applications to appreciate the objective of learning the subject
- Provides an exclusive chapter on AutoCAD 2015 tools and includes certain diagrams developed through the tool

N.S. Parthasarathy is Retd Director, AU-FRG Institute of CAD/CAM and Professor, Department of Mechanical Engineering, College of Engineering, Guindy, Anna University, Chennai.

Vela Murali is currently Professor, Engineering Design Division, Department of Mechanical Engineering, College of Engineering, Guindy, Anna University, Chennai.

Print ISBN: 9780199455393

eISBN: 9780199099108



Print ISBN: 9780198070894

ENGINEERING MATHEMATICS

Engineering Mathematics is a textbook written for undergraduate students of all streams of engineering. This book covers all the topics taught in mathematics in different semesters in the B.Tech. curriculum.

Beginning with the basics, the book first introduces mathematics and its nuances to the students and explains the difference between applied mathematics and engineering mathematics. Fundamental topics such as sequence and series and matrices are discussed with the applications to engineering problems. Other important topics such as three-dimensional geometry, functions of single and several variables, differential calculus, integral calculus, Fourier series, Fourier transform, Fourier integrals, ordinary differential equations, partial differential equations, special functions, vector calculus, complex analysis, and Laplace transform have been discussed in detail. Separate chapters are dedicated to probability, statistics, numerical methods, and discrete mathematics. Most of the chapters comprise sections on applications to engineering problems. There are separate chapters discussing the applications of the mathematical theorems and numerical methods to engineering problems.

Abundant solved examples, review questions, numerical exercises, and multiple-choice questions will ensure that students get enough practice.

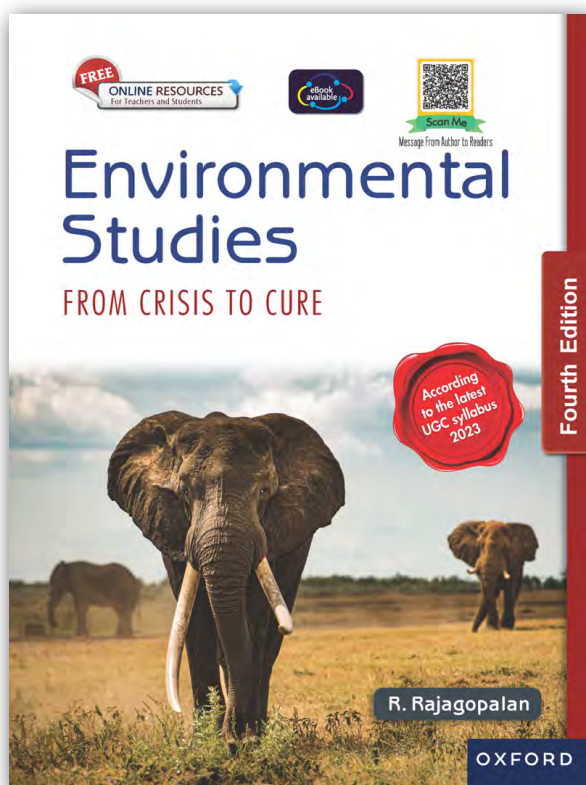
Key Features

- Interesting insights into engineering mathematics through lucid theory
- Separate chapters on the applications to engineering problems discuss how the mathematical theorems are applied in real-world problems
- Interspersed solved examples and illustrations throughout the book, with some demarcated with respect to various engineering disciplines such as neuroscience, biotechnology, radio physics, etc. apart from regular engineering disciplines
- Numerous section review exercises are disseminated throughout the chapters
- MCQs (with answers) and review questions are given at the end of each chapter

Srimanta Pal is Professor, Electronics and Communication Sciences Unit, Indian Statistical Institute, Kolkata. He has also authored *Numerical Methods: Principles, Analyses, and Algorithms*, *Mathematical Methods*, and *Systems Programming*, all published by Oxford University Press.

Subodh C. Bhunia is Director, Orient Digital Company Pvt. Ltd., Kolkata.

eISBN: 9780199099153



Print ISBN: 9789354978944

Environmental Studies

Fourth Edition

The latest edition of *Environmental Studies* covers the 2023 'UGC Guidelines and Curriculum Framework for Environment Education at the Undergraduate Level' designed under the New Education Policy (2020). The book is specially designed for undergraduates of any discipline and assumes no background in mathematics or science beyond the level of the tenth standard. This book will also be useful for those taking the UPSC civil services examinations. It covers the ecology/environment topics in the syllabi for the preliminary and main examinations.

Special Features of the Book

- Other than learning the concepts, understanding the critical issues, and appreciating the solutions, you will also:
- read many true environment-related stories of successes, failures, interconnections, and inspirational individuals
 - reflect on meaningful quotations, discuss deeper issues, watch films and documentaries, and read related novels
 - discover how YOU can make a positive difference to the state of the environment by doing projects, joining groups, and taking action at a personal level

New to this Edition

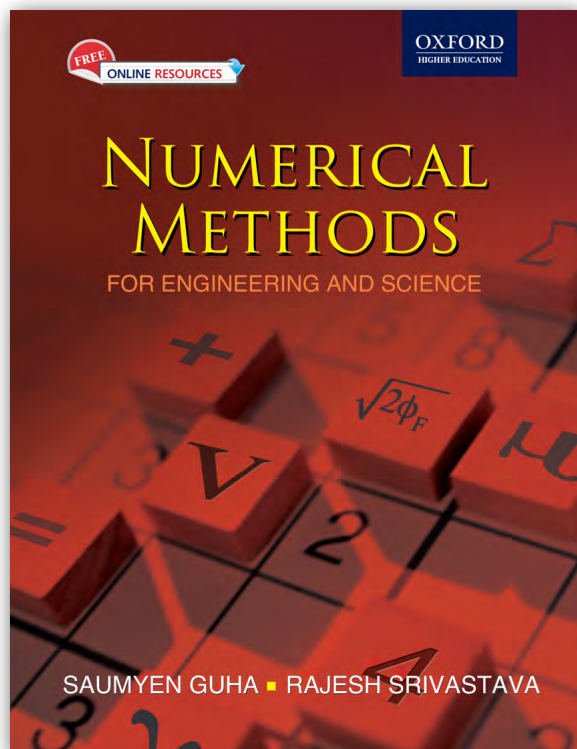
- Climate change has been given importance as the most serious crisis of our time.
- New topics, such as Climate Adaptation and Circular Economy, have been added to cover the 2023 UGC syllabus and the syllabi of some universities.
- The text and stories have been fully revised and updated to reflect current events, reports and studies.
- New material on Disaster Management has been added to the OUP Online Resource Centre.
- The Union Government's 'Lifestyle for the Environment (LiFE) Movement' for the adoption of an environment-conscious lifestyle has been covered.

R. Rajagopalan holds a B.E. (Honours) degree in Mechanical Engineering from the University of Madras and M.Tech. and Ph.D. degrees in Industrial Management from the Indian Institute of Technology (IIT) at Kanpur, India. He taught for over 30 years at IIT Kanpur and IIT Madras.

Prof. Rajagopalan has published more than 20 books on environment for schools, colleges, and the public.

eISBN: 9789354979309





NUMERICAL METHODS FOR ENGINEERING AND SCIENCE

Designed as a textbook for undergraduate and postgraduate students of engineering and science, *Numerical Methods: For Engineering and Science* is an attempt to explain the concepts and principles in such a way that the methods can be applied to any discipline.

The book begins with an introduction to the concept of numerical method as an approximation for solving a mathematical problem and the various kinds of errors and conditions associated with such a method. Subsequently, the book provides detailed explanations of numerical methods for linear system of equations, single as well as multiple non-linear equations, approximation of functions, numerical derivatives and integrals, single and multiple ordinary differential equations, boundary-value problems, and partial differential equations. The last chapter introduces some advanced topics such as approximation using rational functions, finite element methods, and multi-grid methods, for the students interested in numerical computations.

The ingenious use of a popular comic character to introduce various mathematical problems is integrated throughout the book to highlight the applications of different numerical methods.

Key Features

- Provides a balanced combination of analyses and implementation of various methods to help grasp the concepts
- Describes advanced methods such as multi-grid and finite elements to help the reader delve deeper into the subject
- Includes ample solved examples and exercises designed to bring out the finer points of numerical algorithms

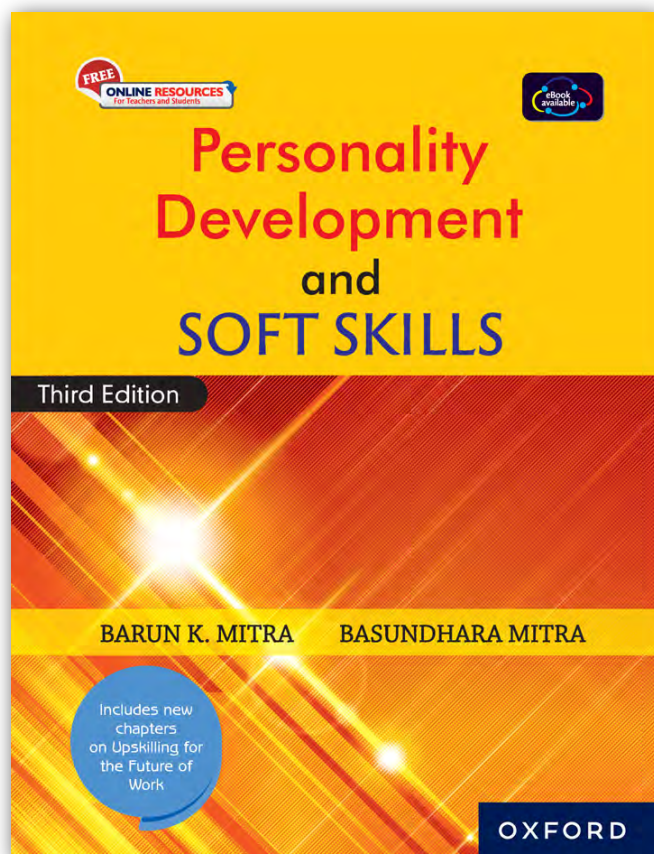
Saumyen Guha, a Ph D from Princeton University, USA, is currently Professor at the Department of Civil Engineering, Indian Institute of Technology Kanpur. He did his B E in civil engineering from the Bengal Engineering College, Shibpur, and M Tech in environmental engineering from the Indian Institute of Technology Kanpur.

Rajesh Srivastava is currently Professor at the Department of Civil Engineering, Indian Institute of Technology Kanpur. He is a gold medalist from the Indian Institute of Technology Roorkee and a Ph D from the University of Arizona, USA.

With more than twenty-five years of teaching experience between them, Dr Guha and Dr Srivastava have both been recipients of letters of recognition for excellence in teaching many a times at the Indian Institute of Technology Kanpur. They have also published numerous papers in national and international journals as well as conference proceedings.

Print ISBN: 9780195693485

eISBN: 9780199083558



Personality Development and Soft Skills

The third edition of *Personality Development and Soft Skills* aims to serve as a detailed guide to equip readers with all the necessary skills required to be successful in the increasingly competitive professional space.

With the help of numerous case studies, classroom-based exercises, and self-assessment tests, the book provides crucial insights on all the core areas associated with soft skills and personality development. Keeping in mind the growing importance of modern learning and working mechanisms, three new chapters on building confidence, upskilling for an online world, and digital literacy have also been included.

Written in a compact and lucid manner, this textbook will assist students as well as professionals in enhancing their personality, soft skills, and increasing their confidence, thereby greatly improving their chances of employability in a digital world.

Key Features

- Provides detailed guidance on enhancing soft skills and personality development for career growth
- Offers valuable inputs on ways to navigate the digital domain
- Includes inputs on avoiding common mistakes in speaking English
- Discusses various forms of digital skills
- Presents several case studies, examples, and illustrations to elucidate the concepts discussed

New to the Third Edition

- New chapters on building confidence, upskilling for an online world, and digital literacy
- New section on the features of LinkedIn
- In-depth discussion of leadership qualities and inclusive attitude
- Soft Skills needed for Remote and Hybrid Work
- Application of digital skills
- Real-world illustrative instances/case studies

Praise for the Previous Editions

'Personality Development and Soft Skills' is fantastically organized and apt for both theory and practical lessons.

—YVG Nukswara Rao, Mentor in English,
Rajiv Gandhi University of Knowledge Technologies

The book is well organized and student friendly.

—Prof. Hyma Apparaju, Jaipuria Institute of Management, Lucknow

The examples and case studies are the USP of this title.

—Prof. Vinky Sharma, Jaypee Business School, Noida

Exercises given in the book are good and have a practical approach attached to them.

—Prof. Neha Divekar, Symbiosis Institute of Technology, Pune

Print ISBN: 9789354978371

eISBN: 9789361033025



Print ISBN: 9780199481125

PROFESSIONAL COMMUNICATION

THIRD EDITION

The third edition of *Professional Communication* is an exhaustive textbook tailored to meet the syllabi requirements of undergraduate students of engineering.

Adopting a functional and practical approach, the book describes the basics of technical communication, distinction between general and technical communication, and significance of language as a communication tool. Following this, it goes on to discuss important topics such as barriers to communication, technical vocabulary, word formation, sentence construction, and paragraph development. Business and official letters, reports and technical proposals, along with negotiation skills covered in detail to give students a sound understanding of skills required to work in a professional environment. The book also covers body language, dimensions of speech, interpersonal communication, and ways on improving listening skills. The last chapter on value-based readings is designed to enhance reading and comprehension skills of students.

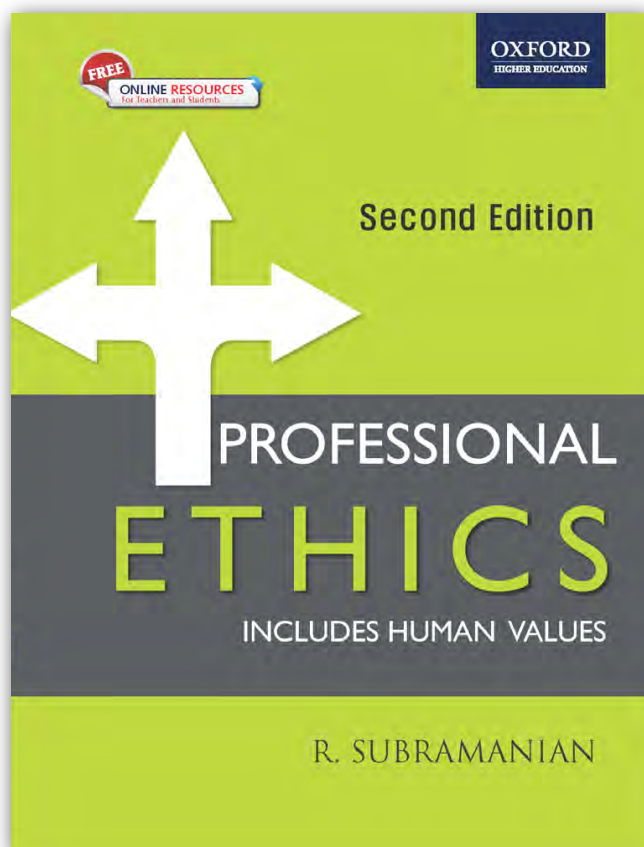
Key Features

- User-friendly approach with simple and easy-to-understand language
- Detailed discussions on English grammar and its correct usage, negotiation skills, and interpersonal communication
- Book-end appendices on common errors of usage, punctuation and capitalization, words commonly misspelt, acronyms and abbreviations, and British and American vocabulary

Meenakshi Raman is Professor and Head, Department of Humanities and Management at the Goa Campus of the Birla Institute of Technology and Science (BITS), Pilani.

Sangeeta Sharma is Associate Professor at the Pilani campus of BITS, Pilani.

eISBN: 9780190993689



Print ISBN: 9780199475070

PROFESSIONAL ETHICS

Second Edition

The second edition of *Professional Ethics* is a comprehensive textbook designed for budding engineers and managers. The book has been written in a simple manner with plenty of examples and case studies that will enable the readers to effectively resolve the ethical issues they will face in their professional lives.

Starting with basic terminologies and ethical views of many thinkers from India and abroad, the book discusses the basic tenets of professionalism and professionalism, ethics in engineering, engineers' responsibility for safety, and responsibilities and rights of individuals and professionals along with impact of social media, personal ethics, and value sciences. Global ethical issues, corporate social responsibility, media, and research are some of the other topics covered in the book. Intellectual property rights, ethics audit, and development and detailing of ethical codes from professional engineering bodies are also included. In addition to these, human values and attitudes, which forms the basis of ethical decisions and actions, is also included.

New to This Edition

- New sections on impact of social media, nature of values, personal ethics, value sciences, and so on
- Appendix I which provides a set of practical exercises at the end of the book for instructors to conduct in the class
- Updated content throughout the text to bridge minor gap areas
- Multiple choice questions and more review exercise questions at the end of every chapter

Praise for the First Edition

'The group exercises at the end of each chapter are an attractive component of the book providing an effective environment for group discussion and brainstorming sessions.'

—Prof. Bharadwaj Choudhury, Kaziranga University

'The whole gamut of Professional Ethics has been covered in this book.'

—Prof. Jamuna Bala, JP University

'The book contains many good examples and case studies.'

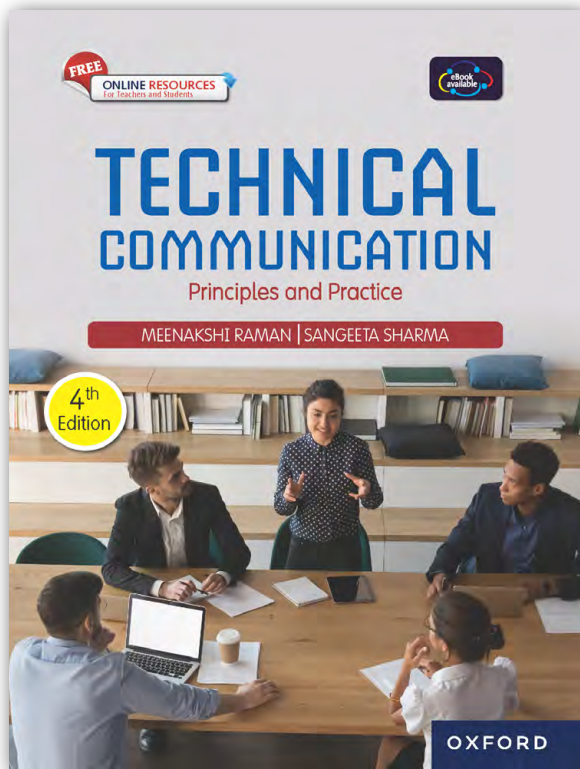
—Prof. Manisha Vyas, Rajasthan Technical University

R. Subramanian retired as professor and head of the civil engineering department at the National Institute of Technical Teachers' Training and Research (NITTTR), Chandigarh.

eISBN: 9780199094318



TOC list



Print ISBN: 9789354972256

eISBN: 9789354974878

TECHNICAL COMMUNICATION

Principles and Practice

 4th
Edition

Technical Communication, Fourth Edition is an ideal textbook intended to provide effective communication skills to the undergraduate students of engineering. To build skills of job readiness in readers, concepts have been developed with the support of numerous examples, samples, and practice exercises. All the four language skills (LSRW) have been given adequate coverage to make understanding of communication more effective and appropriate to the context.

The book is divided into 4 parts:

Part I: Introduction to Technical Communication

Part III: Reading and Writing

Part II: Listening and Speaking

Part IV: Review of Grammar

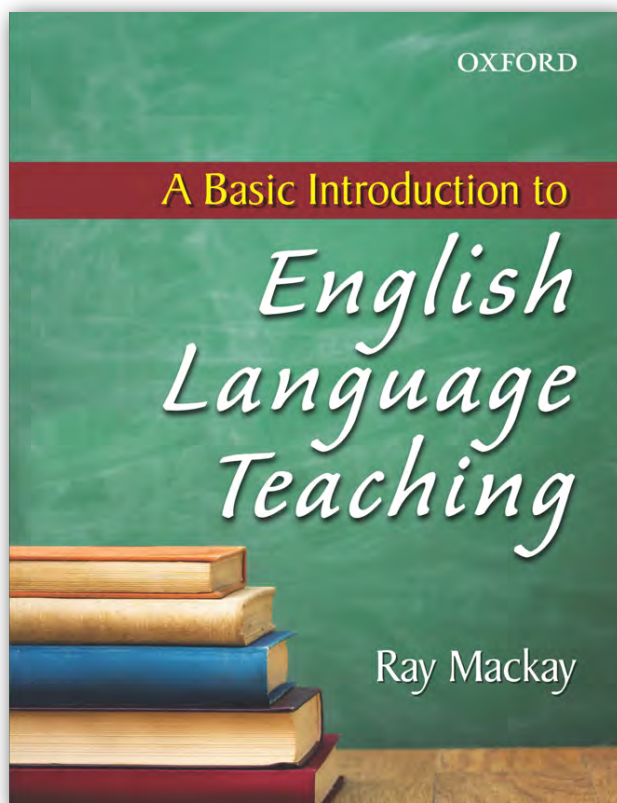
New to this edition

- Contains 4 modules on enhancing professional skills of readers: Communication, Time Management, Negotiation Skills, and Online Meetings
- Includes new sections on paralinguistic features, technology in communication, & ethics and etiquettes in communication
- Provides detailed discussions on mother tongue influence, negotiation skills, and journal writing
- Comprises chapter-wise author audio podcasts featuring core concepts of the chapters as well as tips for better etiquettes, presentation, tone, and pronunciation
- Contains listening and speaking practice exercises on telephonic conversation, phonetics, and more

Meenakshi Raman is Former Professor and Head, Department of Humanities and Social Sciences, at BITS Pilani, Goa campus.

Sangeeta Sharma is presently Professor at BITS, Pilani. She is currently teaching courses on communication and advertising, and has published several articles on communication.

ENGLISH LANGUAGE PROFICIENCY AND SOFT SKILLS



Print ISBN: 9780199457625

A Basic Introduction to English Language Teaching

How we teach is often influenced by how we were taught. Therefore the methods and practices which become an unconscious set of assumptions about teaching appear as the dominant methodology in our classrooms. It is important that we as teachers of English become aware of this challenge, overcome it, and are able to contribute to greater and richer learning.

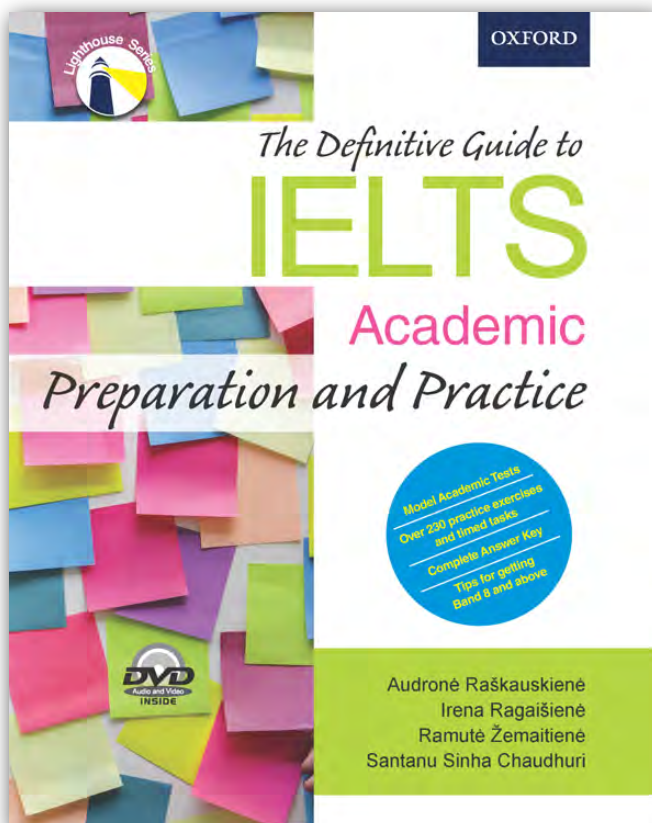
A Basic Introduction to English Language Teaching brings home ideas and practices which contest the dominant methodology. Keeping theory and jargon away, the book works through a host of case studies, textbook examples, illustrated activities, classroom tasks and discussions to help teachers with little or no prior training. It also attempts to bridge the gap between formal training and real-life classroom needs. Lucid but comprehensive, this book wishes to remind users of the fundamentals of teaching listening, speaking, reading, writing, vocabulary and grammar. Chapters on teaching poetry and developing English Language Teaching skills build on the fundamentals—exposing teachers to a wide range of classroom needs and solutions which include continuous assessment and the use of the Internet.

This book draws upon the author's significant experience as a teacher, author, teacher-trainer and textbook consultant for those who teach English in India. Not a run-of-the-mill methodology book, *A Basic Introduction to English Language Teaching* is path-breaking in being a learner-centric and hands-on guide for Indian teachers of English as a second or foreign language.

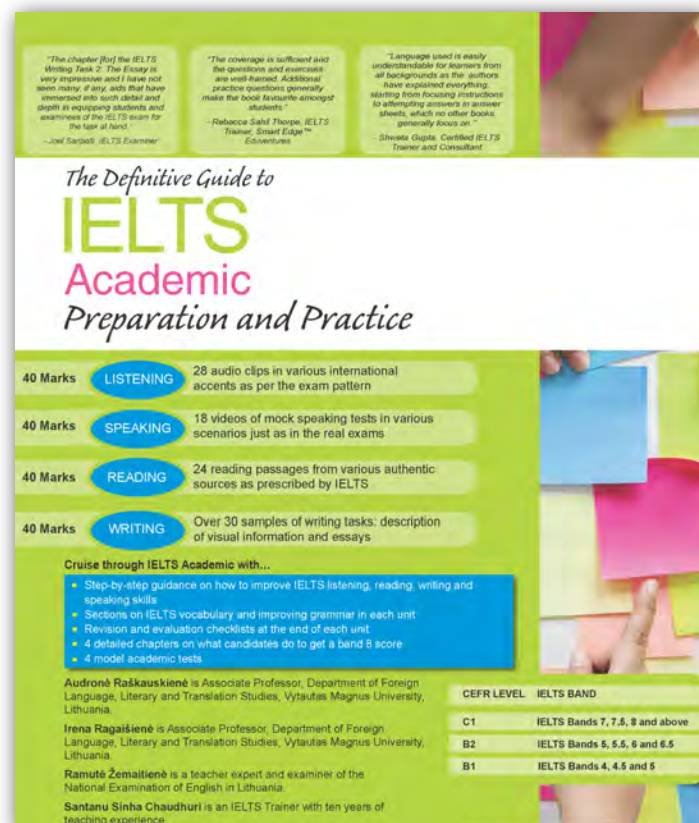
Tips on teaching
English
according to the
NCF guidelines

Ray Mackay is an ELT expert and teacher trainer with more than thirty years' experience and was associated with primary teacher-training and textbook projects in eastern India. He has been awarded the Member of the Order of the British Empire award for his services to English teaching in India. He lives in Achmelvich, Scotland with his family and sheep and continues to teach applied linguistics.

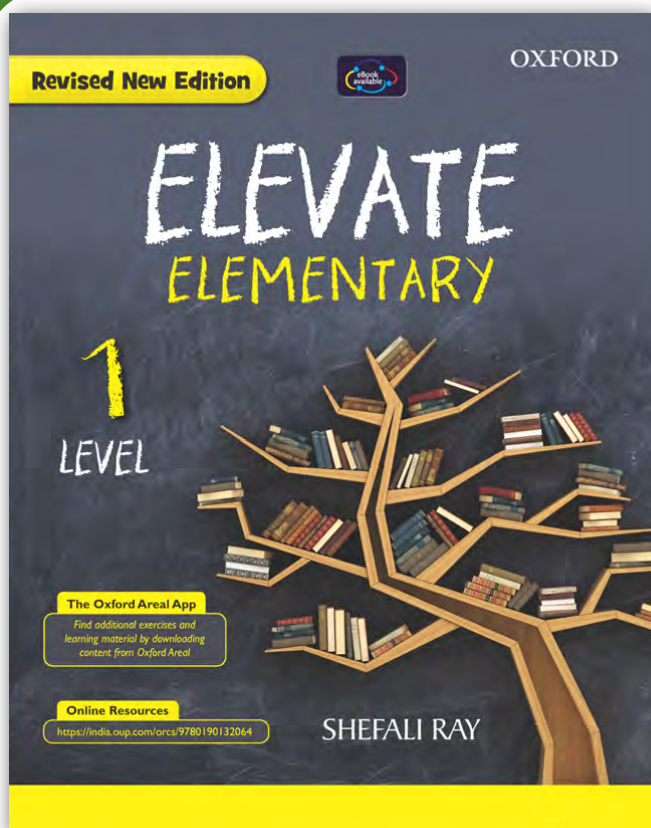
eISBN: 9780190992538



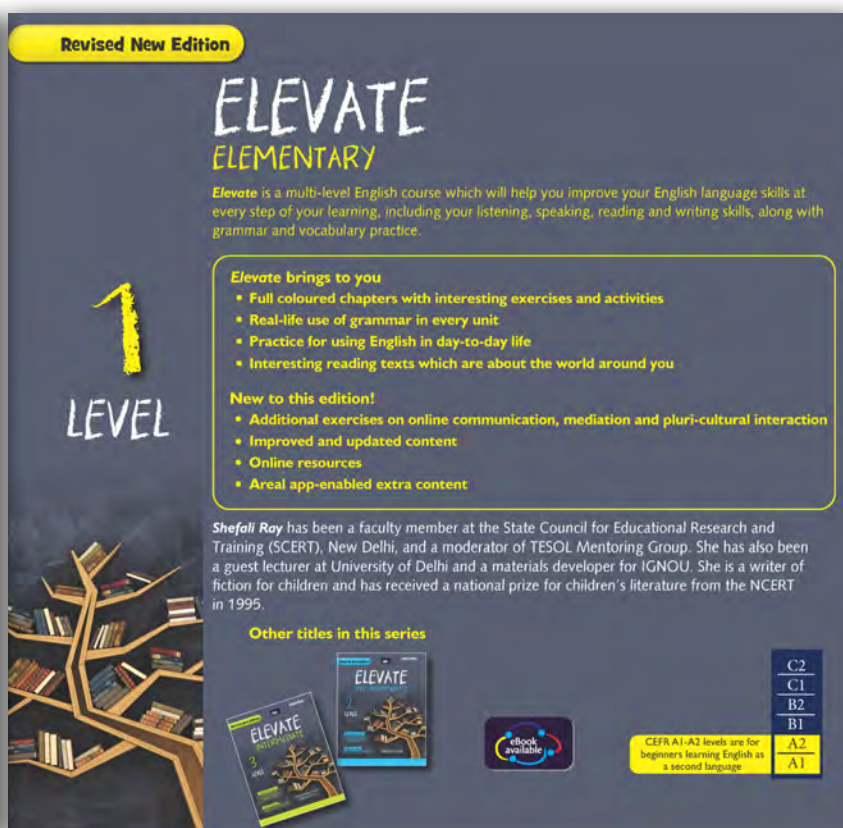
Print ISBN: 9780199474820



eISBN: 9780190992583



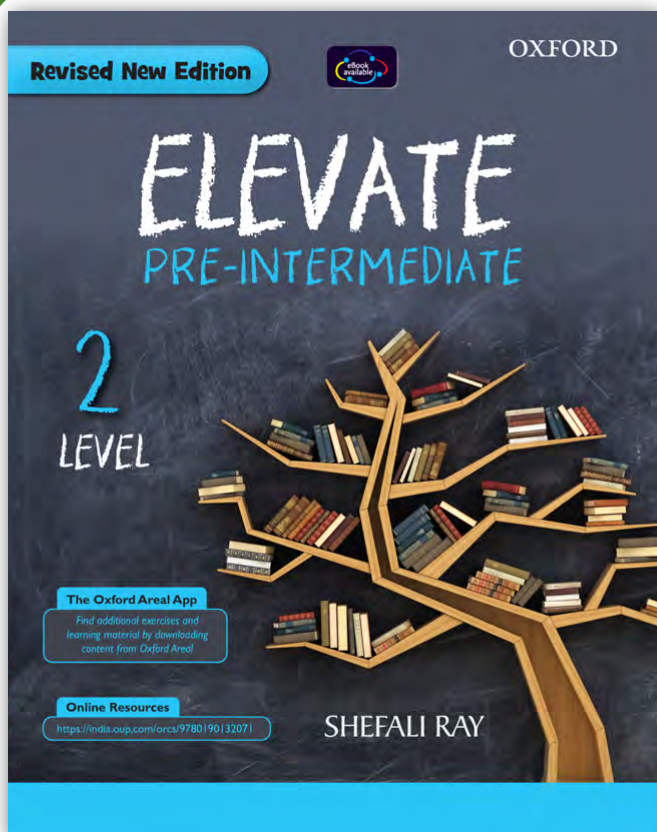
Print ISBN: 9780190132064



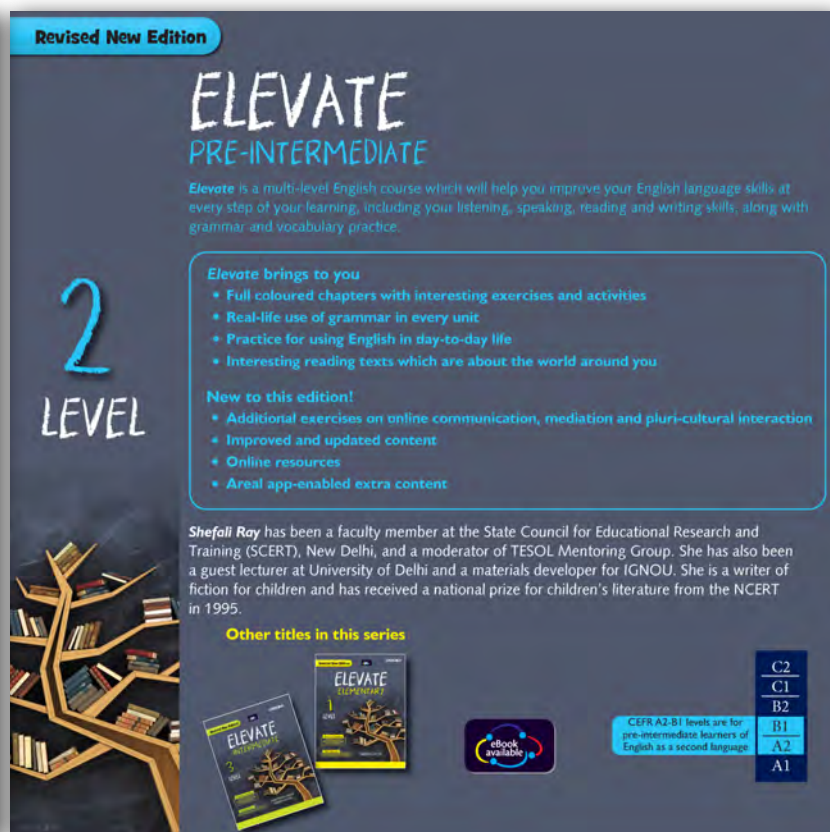
eISBN: 9788195111282



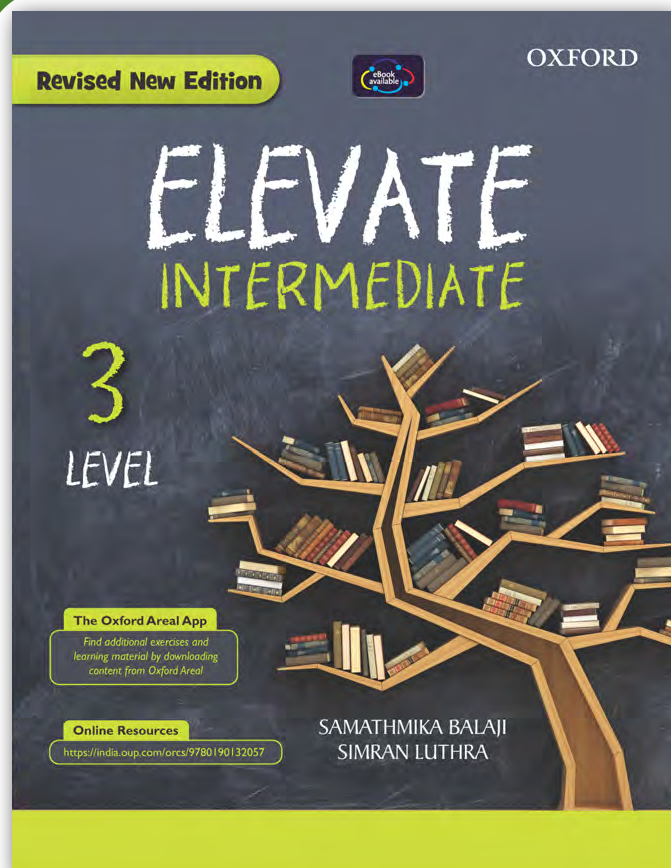
TOC list



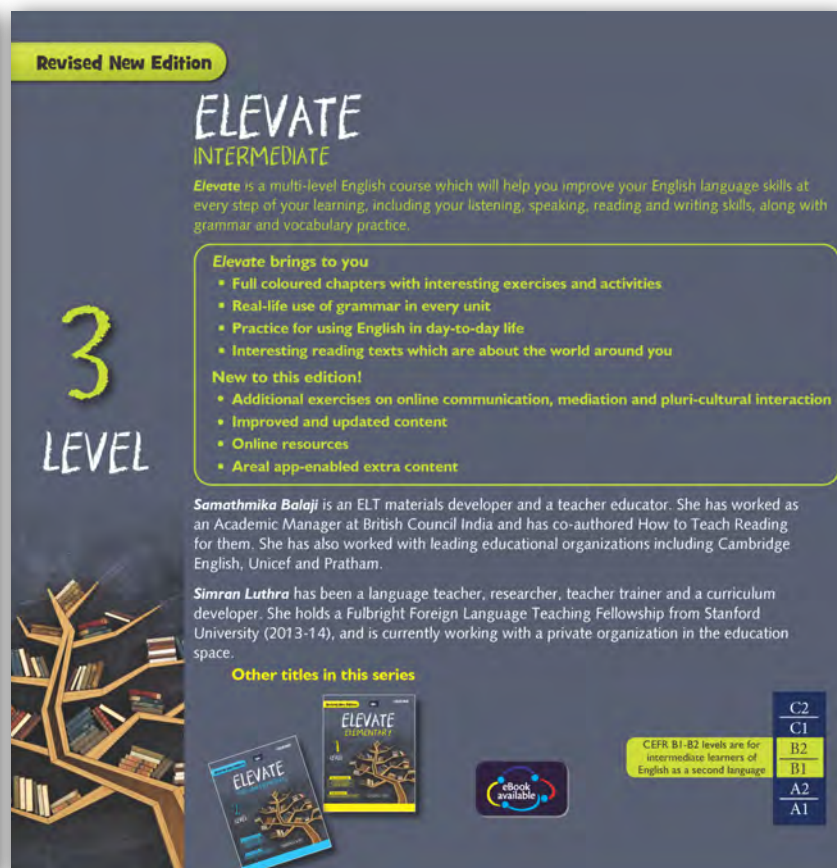
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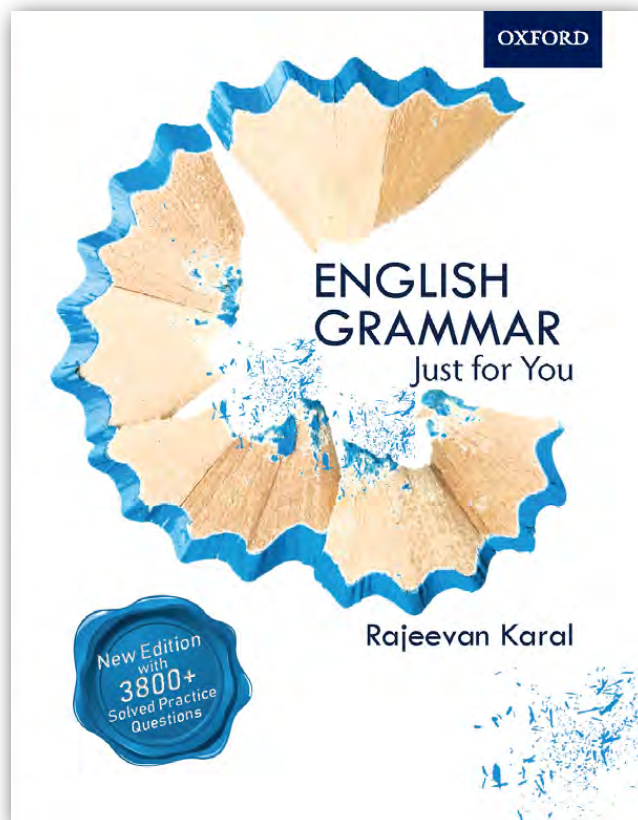
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Print ISBN: 9780190132057



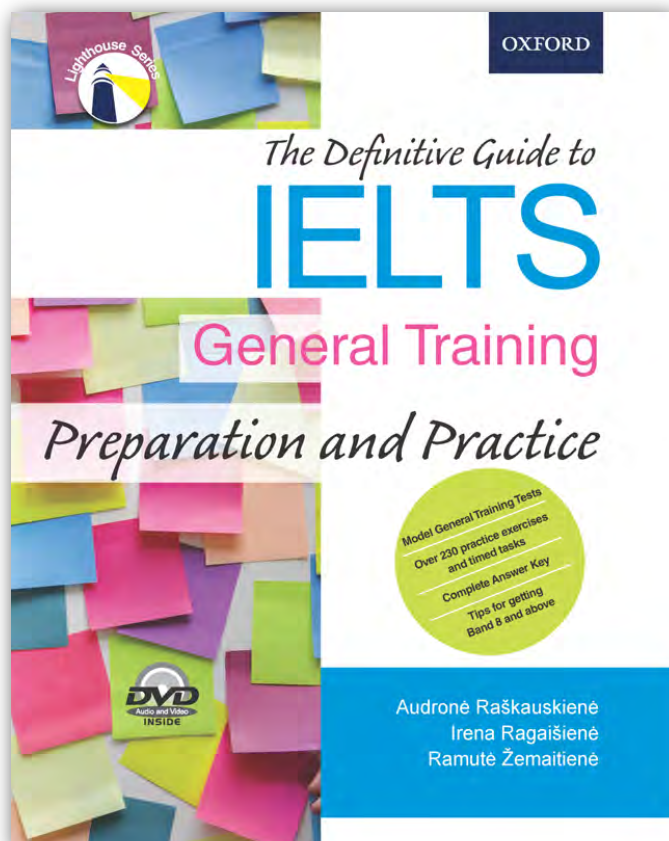
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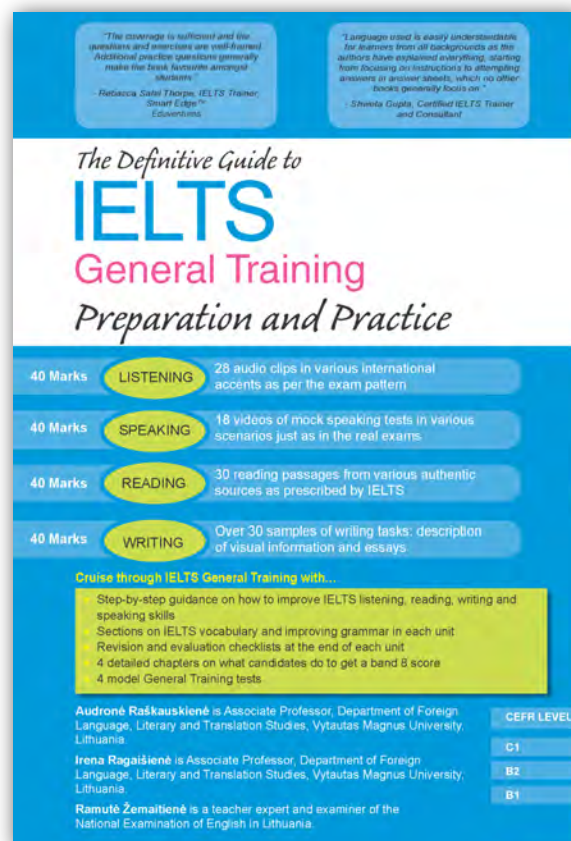
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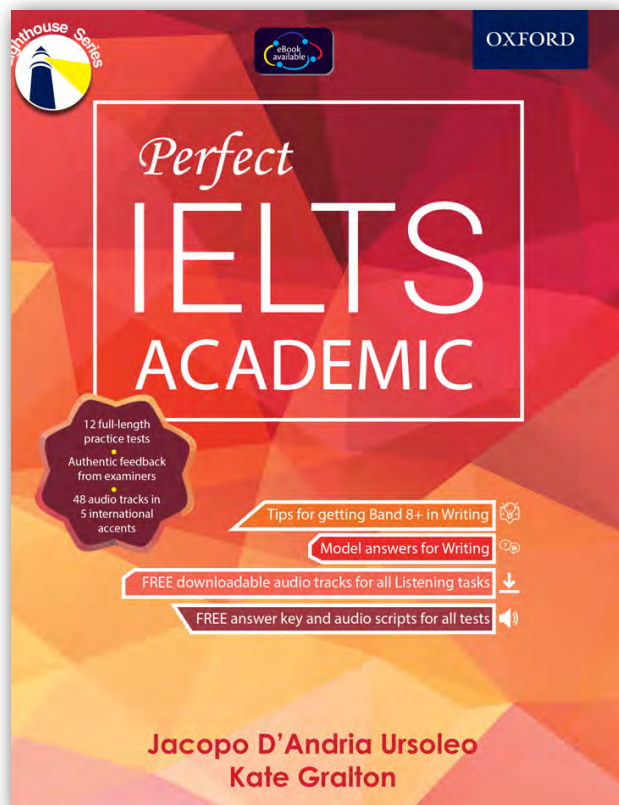


Print ISBN: 9780199492039

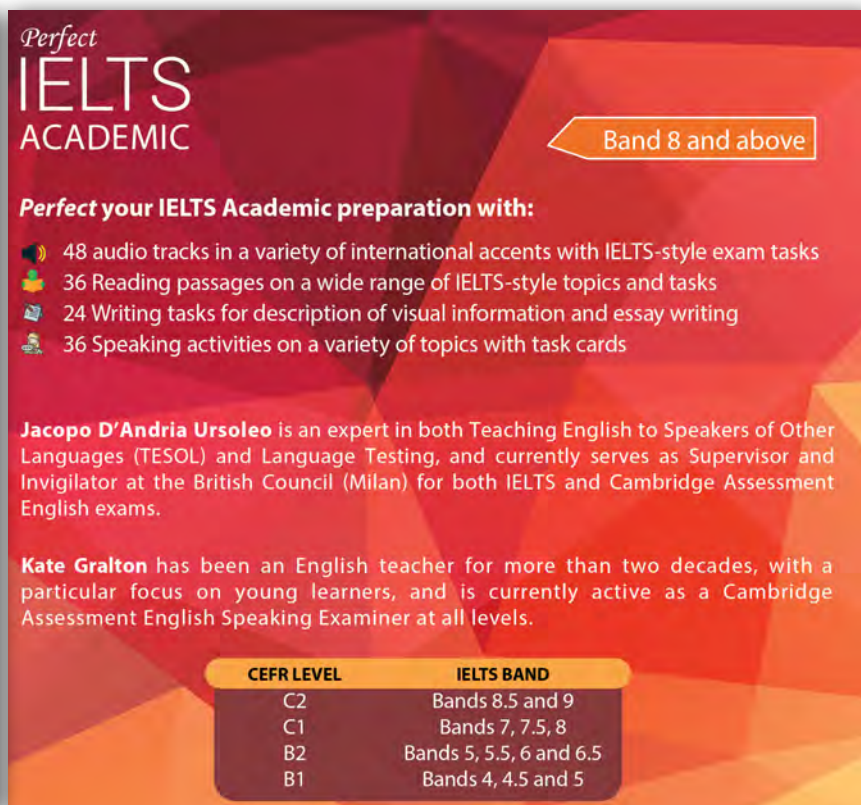


eISBN: 9780190992576

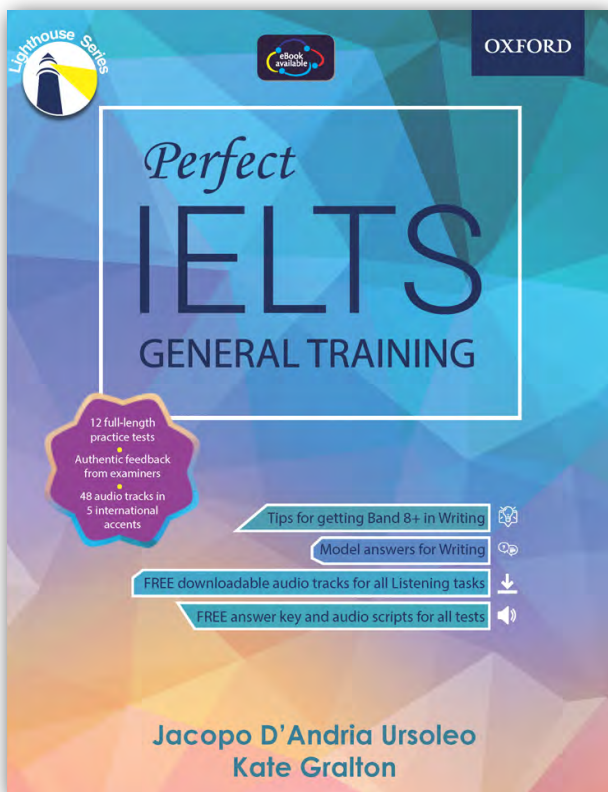




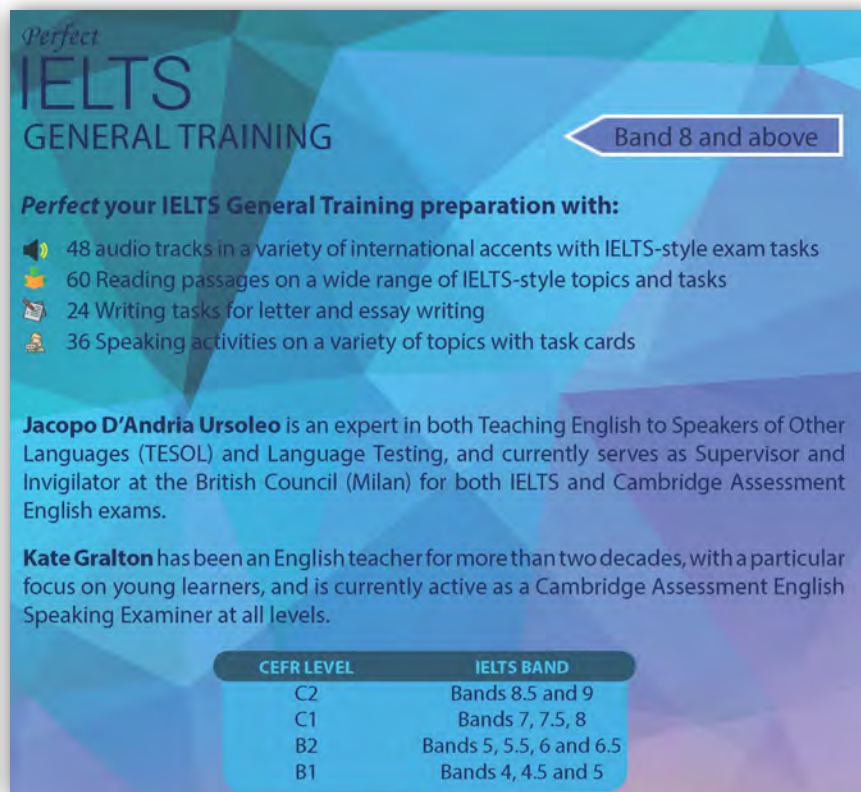
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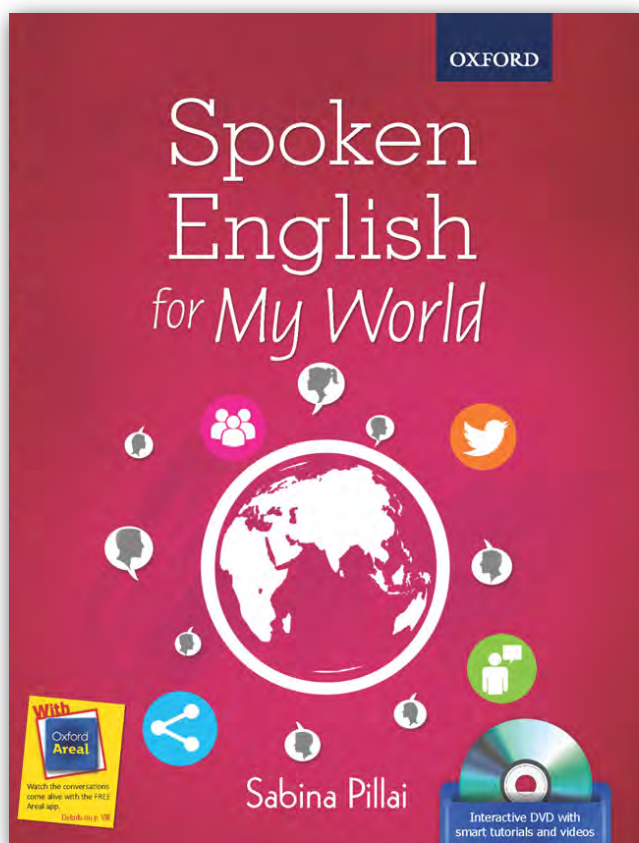
eISBN: 9780190993238



Print ISBN: 9780190127268



eISBN: 9780190993245



Print ISBN: 9780199460809

Spoken English for My World

The key to speaking English fluently and correctly is confidence. Confidence comes from practising speaking with the help of simple examples at one's own speed. *Spoken English for My World* makes this possible for you. By the time you finish using the book you are guaranteed to be able to speak English with anyone from any part of the world, confidently and correctly.

Why do you need *Spoken English for My World* and no other book?

- It is mapped to the Common European Framework for Language Reference in English—CEFR for English to teach English speaking skills according to global standards
- It makes learning simpler and more enjoyable with the help of audio and video guides, interactive exercises, pronunciation tutor and the Oxford Areal App
- This book has three sections teaching spoken English for your personal, professional and social use—from introducing yourself to facing visa and job interviews
- Common Error suggestions in the book for spoken English
- Bonus conversations, vocabulary support, answer key and audio scripts in the end sections
- A DVD that works like your personal tutor with never-before interactive features for self-learners
- Printable Tutorials on phrasal verbs, idioms and commonly confused words inside the DVD

Sabina Pillai is a professor of English at a college in Delhi University. She did her PhD on Semiotics and Communication from Jawaharlal Nehru University in Delhi and has taught the English language to college students, corporations, and university undergraduates for more than 20 years. She was the recipient of the Cambridge English: Teacher Training Scholarship at the International Association for Teachers of English as a Foreign Language (IATEFL) conference in 2014 at Harrogate, UK. She has a Diploma in Teaching, Training and Assessing Learning from City and Guilds, UK. She has been a consultant with the British Council.

C2
C1
B2
B1
A2
A1

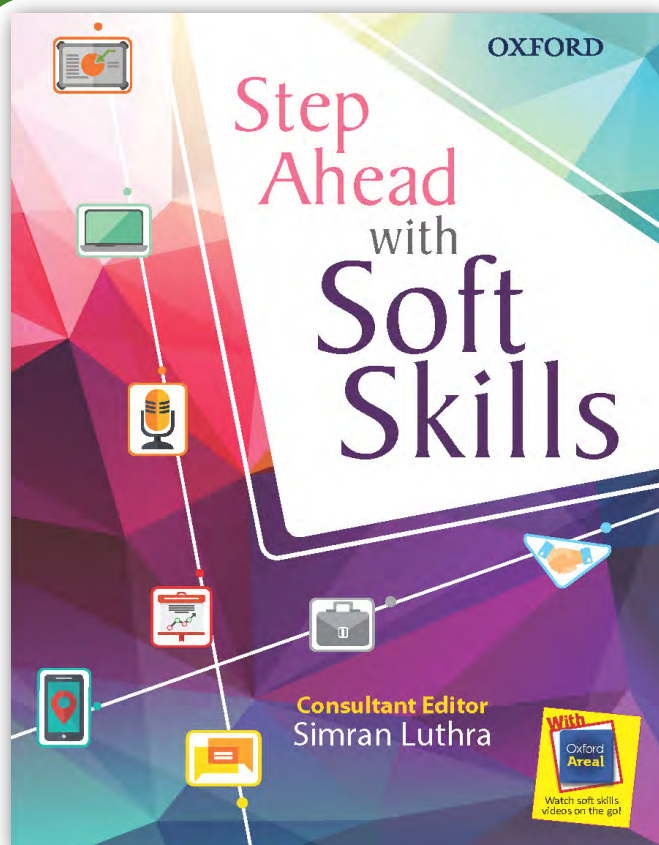
Mobile learning support

Record and rehearse on the DVD

More than 150 conversations

Grammar and pronunciation

eISBN: 9780190992514



Print ISBN: 9780199474400

Step Ahead with Soft Skills

Step Ahead with Soft Skills is the perfect guide for a self-learner because it focuses on reducing the gap between theory and practice. Compiled by academic and industry experts, this book addresses the requirements of professionals in any field who are beginning their careers or want to polish their workplace skills. Written in simple and lucid language, its hands-on approach helps in personality development and in cultivating basic etiquette, communication and documentation skills.

Key Features

- A variety of exercises, checkpoints and activities to evaluate progress
- Interactive, exciting case studies which help readers to put on their thinking caps
- Graphs, charts and practice tips for students to follow dos and don'ts and further hone their day-to-day skills
- Detailed step-by-step explanation on how to ace group discussions and personal interviews with mock samples
- Chapter recaps and lists of key terms to help revise and recollect

"This book combines practical aspects of soft skills with numerous activities and suggestions. I believe this is going to be very useful for students and young professionals to prepare themselves for a successful career."

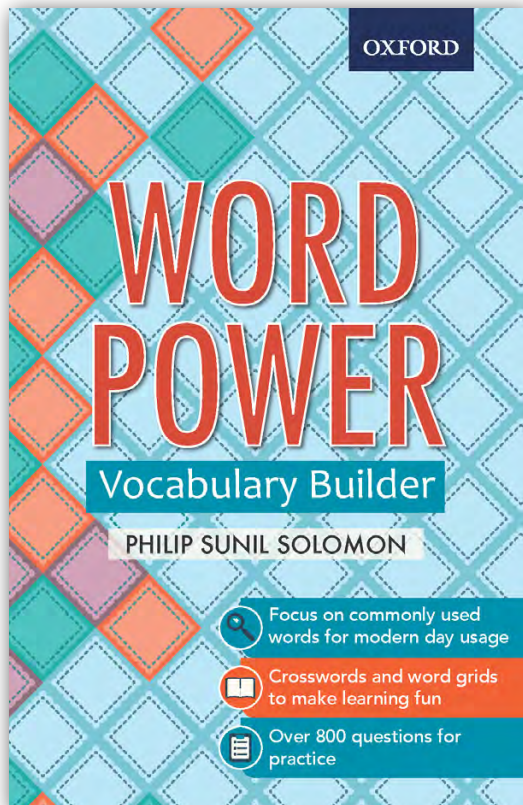
Zubin Rashid, career skills coach and author of *One Too Many*

Answer Key can be found on <https://india.oup.com/orcs/9780199474400>

eISBN: 9780190992521



TOC list



Print ISBN: 9780199479306

WORD POWER

*Do you find technical words hard to understand?
Do you find comprehension passages difficult to solve?
Are you having trouble using the right words in your meetings or presentations?
If yes, then you need to pick up this book right now!*

Word Power: Vocabulary Builder is your ultimate guide to speaking fluently and writing flawlessly. The book contains:

A diagnostic test in the beginning to check your level

'Check your Progress' sections for step-by-step progress tracking

A rich collection of words for present-day use in the business world, IT sector and social media

A separate chapter on word roots, which helps in building a sound vocabulary

Language on the go: a section which focuses on errors which are made while using English expressions in real life

A detailed section on collocations to teach you how to speak like a native speaker

Tips and tricks to improve vocabulary

Challenging word puzzles to make learning interesting

Over 800 questions plus answers, for practice

eISBN: 9780190992507

HOTEL MANAGEMENT



Print ISBN: 9780198084006

COMPUTERS IN HOTELS Concepts and Applications

Computers in Hotels: Concepts and Applications is a comprehensive textbook designed to meet the needs of undergraduate students of hotel management programmes. The book covers the fundamentals of computers and their applications in the hotel industry.

The book is divided into two parts. The first part, *Computer Fundamentals*, introduces the reader to the basics of computers. It further elaborates on various operating systems, MS Office, the Internet, and database management systems (DBMS). The second part, *Computer Applications in the Hotel Industry*, provides detailed discussions on hotel information system, computerized reservation system (CRS), and room management. It also covers the accounting module, food and beverage (F&B) management, property management system (PMS) interface, and management information system (MIS).

Students will find this book useful for its coverage of the fundamentals of computers and their applications in the hotel industry, explained through numerous illustrations, examples, exhibits, flow charts, and cases. It will also be useful for hospitality professionals due to its practice-oriented approach.

Key Features

- Covers the fundamentals of computers as well as their applications in the hotel industry
- Introduces the various hotel departments to beginners who do not have exposure to hotels
- Discusses the functions of computers in revenue-generating and non-revenue-generating departments
- Includes various flow charts and case studies for a better understanding of the concepts discussed

Partho Pratim Seal is Assistant Professor, Welcomgroup Graduate School of Hotel Administration, Manipal University. He was earlier lecturer at the Institute for International Management and Technology, Bengal. He also has eight years of industrial experience and has worked in the food production department of a multi-speciality club in Kolkata and various restaurants in Delhi. He completed his diploma in hotel management from the Institute of Hotel Management Catering Technology and Applied Nutrition, Chennai; M Sc in hotel management from Vinayaka Mission University, Salem; and PG Diploma in Business Management from the Institute of Management Technology (IMT), Ghaziabad.

eISBN: 9780199094196


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 for Teachers and Students

Food and Beverage Management

Partho Pratim Seal



Food and Beverage Management

Food and Beverage Management is a comprehensive textbook designed to meet the needs of hotel management students. It provides an in-depth coverage of various key aspects of managing food and beverage (F&B) services such as budgetary and control elements, along with the latest trends in the field.

The book, comprising 12 chapters, begins by giving an introduction to the F&B industry, its objectives, and the requirements of F&B control. Following this, it discusses different elements of purchasing, receiving, storing, and inventory control. The book also explains F&B costing, points to be considered while fixing prices, payroll analysis, and steps involved in preparing budgets in detail. It concludes with chapters on menu management, menu engineering, and ways of dealing with frauds made in the industry.

With its up-to-date coverage of concepts along with numerous real-life examples, exhibits, and case studies, this book will be highly useful not only for students but also for professionals.

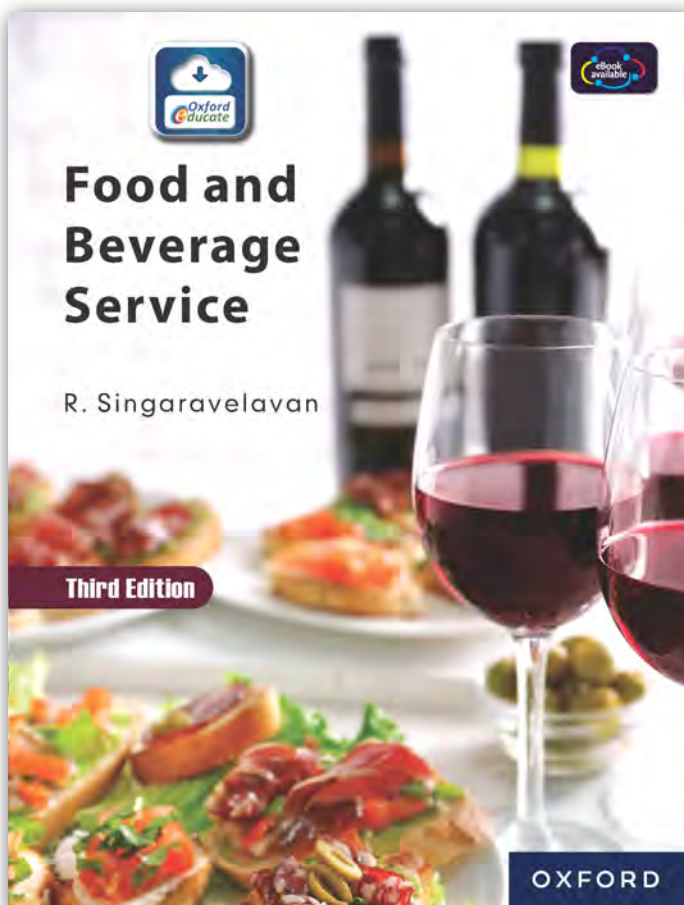
Key Features

- Discusses topics such as budgetary, cost, and purchasing controls, which help in forecasting sales, generating revenue, and finalizing menu
- Provides a discussion on commonly prevalent frauds and audit systems used in hotels to prevent them
- Includes numerous exhibits and multiple chapter-end case studies with discussion questions based on them
- Contains chapter-end exercises including multiple choice questions, concept-review and critical thinking questions, and interesting project assignments

Partho Pratim Seal is Assistant Professor, Welcomgroup Graduate School of Hotel Administration (WGSHA), Manipal University, Manipal.

Print ISBN: 9780199469833

eISBN: 9780199094394



Food and Beverage Service

R. Singaravelavan

Third Edition

OXFORD

Third Edition

Food and Beverage Service

The third edition of **Food and Beverage Service** is specifically tailored to meet the requirements of the students of hotel management courses. Each of the six sections – introduction to food and beverage service, menu knowledge and planning, food service, beverages and tobacco, bar operations and control, and ancillary functions – have been thoroughly updated to cover all the aspects of the food service industry. Due to its exhaustive coverage and practical approach, this textbook is suitable not only for students, but also for professionals.

Key Features

- Detailed information on food and beverage staff and their responsibilities, French classical courses with examples, sample menus, various types of covers, service procedures, breakfast, brunch, and high tea
- Exhaustive information on various types of wines, beers, distillation processes, spirits, liqueurs, cocktails, and bar operations
- Sample formats, images, tables, and flowcharts
- Review questions and assignments at the end of each chapter

New to the Third Edition

- Chapters updated with new topics such as the importance of food service industry in travel and tourism, meal experience, single fermentation sparkling wine, old world wines vs new world wines, health hazards, merchandising and sales promotion, SOPs, training methods, and WOW factors
- Sample menus with wine suggestions
- Additional information on hops and types of malts, online reservations, and so on
- Multiple Choice Questions through QR Codes

Praise for the Book

It is a very easy-to-understand and student-friendly textbook.

– Prof. Denny Augustine, Christ University, Bengaluru

The textbook covers every aspect of food and beverage service, which is explained well through pictures and tables.

– Prof. Amit Kumar, Kurukshetra University, Kurukshetra

The table of contents provides adequate coverage as per the university syllabus.

– Prof. Bharat Kapoor, Lovely Professional University, Jalandhar

R. Singaravelavan is a consultant and trainer in the hospitality sector. He was formerly HoD of CSHM, SNR Sons College, Coimbatore, and Principal of State Institute of Hotel Management and Catering Technology and State Institute of Hospitality Management, Kozhikode.

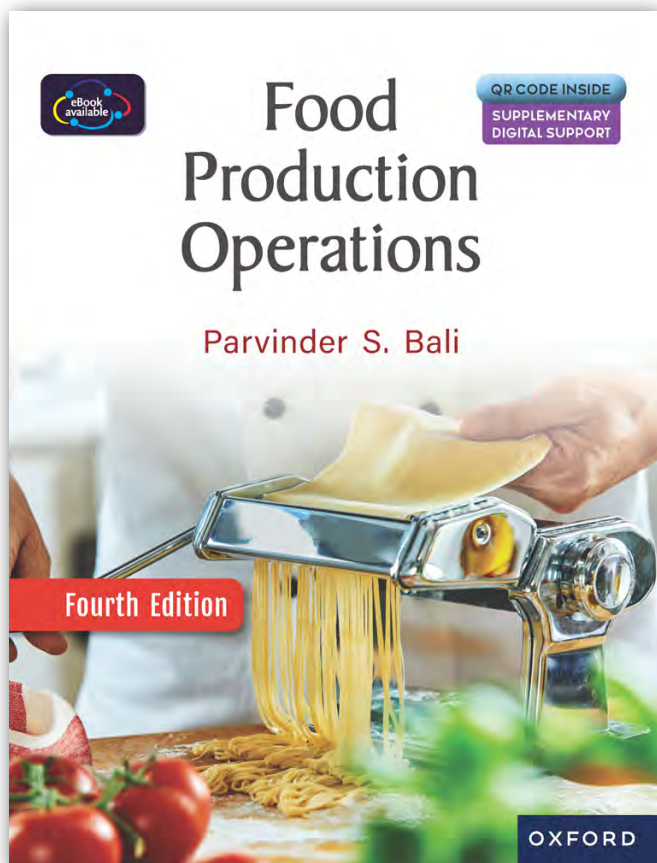
Print ISBN: 9789354977299

eISBN: 9789361030710



TOC list

102



Food Production Operations

Fourth Edition

The fourth edition of *Food Production Operations* is a comprehensive text designed for students of degree and diploma courses in hotel management. The book introduces students to the world of professional cookery and covers all aspects of food production. To keep the students and teachers updated about the new happenings in the culinary world, a new section on food safety, HACCP, and ISO 22000 has been added in this edition. With its up-to-date coverage and practice-oriented approach, this book would also be useful to aspiring chefs, besides hotel management students.

Key Features

- Introduces the basics of Indian and Western cuisines
- Includes sections on food safety, new concepts in wine and food pairing, and game and poultry
- Throws light on the role of FSSAI in food industry and the importance of grooming in the kitchen
- Explains the practical aspects of food production with photographs, tables, and videos

New to the Fourth Edition

- Cloud kitchens, modern methods, and cooking equipment
- Contemporary trends in wine and food pairing
- Classical French sauces
- Sable Breton, sourdough, and artisanal breads
- Commonly used seafood and rice in Indian cooking
- Local Indian cheeses
- Some types of vegetables that are locally sourced

Praise for the Book

The book is a great collection of the required text matter and adequately covers all the topics as per the syllabi.

— Dr. M K Dash, HoD and Principal, IHM, Gwalior

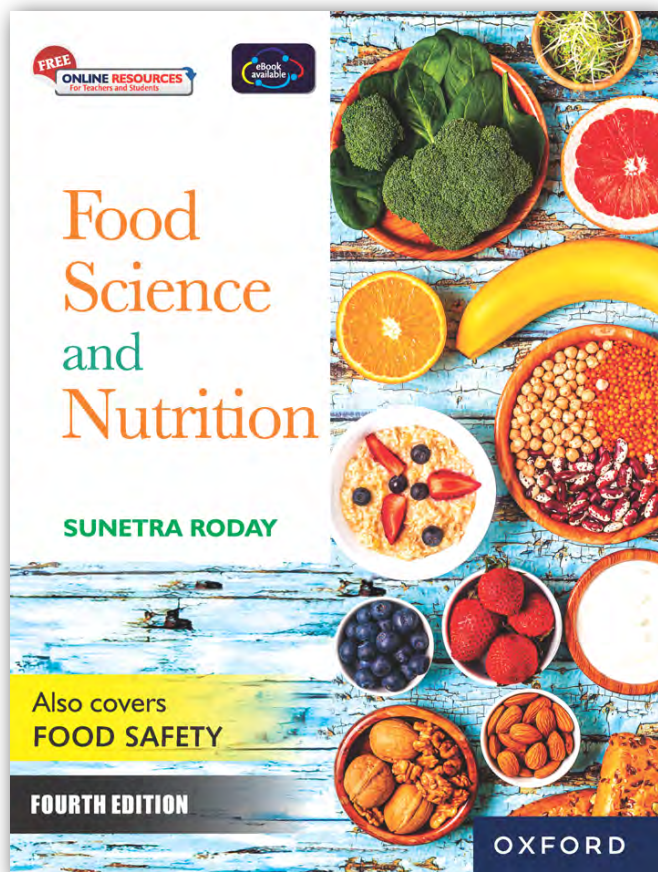
This is an excellent book straight from the heart of a passionate chef-academician who appreciates the need of the industry and also is in continuous touch with students, thereby understanding their needs and developing the content accordingly.

— Amit Joshi, Assistant Professor, HoD, Food Production, School of Hotel Management and Tourism, LPU

Dr Chef Parvinder S. Bali is the Director and owner of School for European Pastry and Culinary Arts, Gurugram.

Print ISBN: 9789354977398

eISBN: 9789361037498



Food Science and Nutrition

FOURTH EDITION

Based on the recent developments and changing trends in the field, the fourth edition of *Food Science and Nutrition* provides exhaustive and updated chapters in the areas of food science, food safety and nutrition. The aim of the book is to enable readers apply their knowledge efficiently—be it at home, in the food industry, hospitality or healthcare sector, and provide safe, wholesome, and quality food without harming the environment. It caters to all the students pursuing a career in any discipline related to food including Hospitality Studies, Catering Technology, Food Technology, Food Science, Nursing, Home Science or Health Sciences. It is aimed at students of undergraduate, diploma, or certificate courses in hotel management, hospitality studies, and catering technology.

New for this edition

- One new chapter on Advances in Processing and Packaging Techniques with special emphasis on ultra-processed and HFSS foods
- Detailed discussions on new trends in food including plant-based proteins, meat substitutes, biofortification and more
- Updated nutritional requirements for Indians as suggested by ICMR-NIN
- Food labeling regulations, Dietary guidelines for food intolerances, food allergies and more have been covered in detail

Praise for this edition

This book covers all aspects of food. One cannot think well, love well, sleep well, if one has not dined well. It is an invaluable resource to all those who prepare and serve the food.

— Dr Chandrakant S. Pandav (Padma Shri Awardee 2021, Medicine)
The Iodine Man of India

The new edition of "Food Science and Nutrition" has been extensively revised and updated, incorporating many additions and features. This edition stands out as an invaluable resource for students and others, offering a comprehensive exploration of the subject with fresh insights and the latest information.

— Mr Pawan Agarwal, CEO (Food Future Foundation) and Former CEO (Food Safety and Standards Authority of India)

About the Author:

Sunetra Roday is a Food Safety, Nutrition and Wellness Specialist, and the Former Principal of Maharashtra State Institute of Hotel Management and Catering Technology (MSIHMCCT), Pune.

Print ISBN: 9789354977909

eISBN: 9789361030444



Print ISBN: 9780190124809

LE CORDON BLEU A Textbook for **French for HOSPITALITY**

French for Hospitality is a textbook which follows the NCHMCT syllabus. The textbook is tailored to meet the requirements of the graduate students of Hotel Management. Developed as a beginner's manual, its simple and effective pedagogy will help learners to become competent in communicating in French.

Divided into 10 lessons, the book covers the essentials of the French language and in particular French for Hospitality, along with grammar, phonics, vocabulary, and exercises for practice. Written in a student friendly manner to make learning easy, all the lessons open with dialogues on different situations: check-ins, check-outs, enquiry at the reception, reservations, ordering food and check-out.

Key Features

- Audio files, linked to dialogues and pronunciation to be accessed through QR codes to enhance the listening and speaking skills of students
- A comprehensive grammar for Anglophones
- A gradual and steady progression of the LSRW skills in French
- French culinary terms and French recipes add to the flavour of the textbook

About the Authors:

The textbook is a team work of the 4 faculty in the Department of French, School of English & Foreign Languages, Madurai Kamaraj University, Madurai.

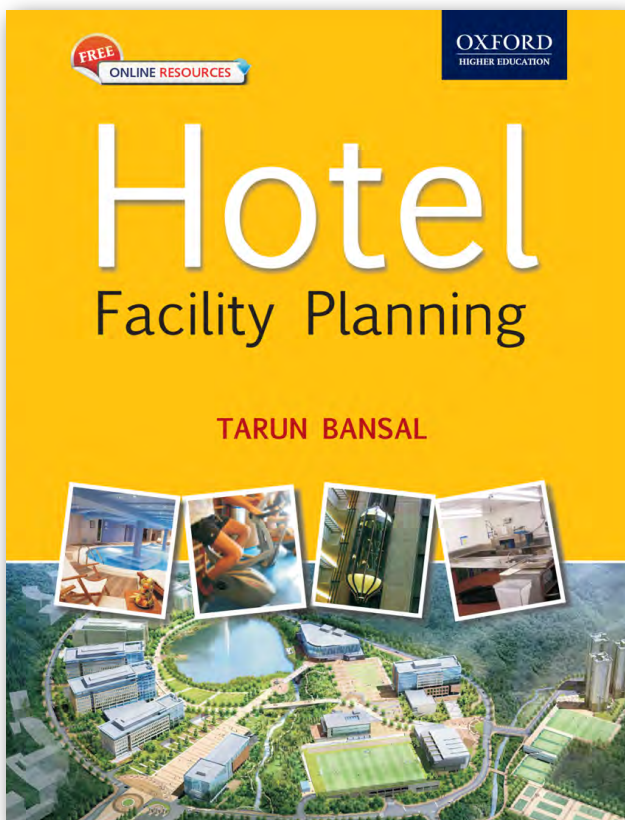
R. Sudha is Professor & Head. With 33 years of experience in the university, her expertise includes Translation, Didactics of Teaching French as a Foreign Language and French Literature.

Jayanthi Balan is Assistant Professor. With 23 years of experience, her specialization is French Literature, Teaching French for Hotel and Tourism Management and Teaching French as a Foreign Language.

P. Ranjith Kumar is Assistant Professor. With 13 years of experience in the university, his areas of expertise are Translation, Linguistics and Cinema.

I. Rahul is Assistant Professor. With 10 years of experience in the university, his areas of interest are History and Literature of France, with special focus on gender and culture studies.

eISBN: 9789391050498



Print ISBN: 9780198064633

Hotel Facility Planning

Hotel Facility Planning is a comprehensive textbook designed especially for the students of hotel management. It explains the basic concepts of planning and designing hotel facilities with the help of numerous examples, tables, and illustrations.

Divided into ten chapters, the book begins with a detailed overview of the hotel classification on the basis of facilities and services. This is followed by detailed discussions on hotel, restaurant, and kitchen design. The book goes on to provide specifications for equipment used in hotels, safety measures to be followed in kitchens, and designing storage spaces. The book includes separate chapters on project management; emerging trends of energy conservation in facility planning; incorporation of design features for the physically challenged; and technical aspects of facility planning and designing of several renowned properties.

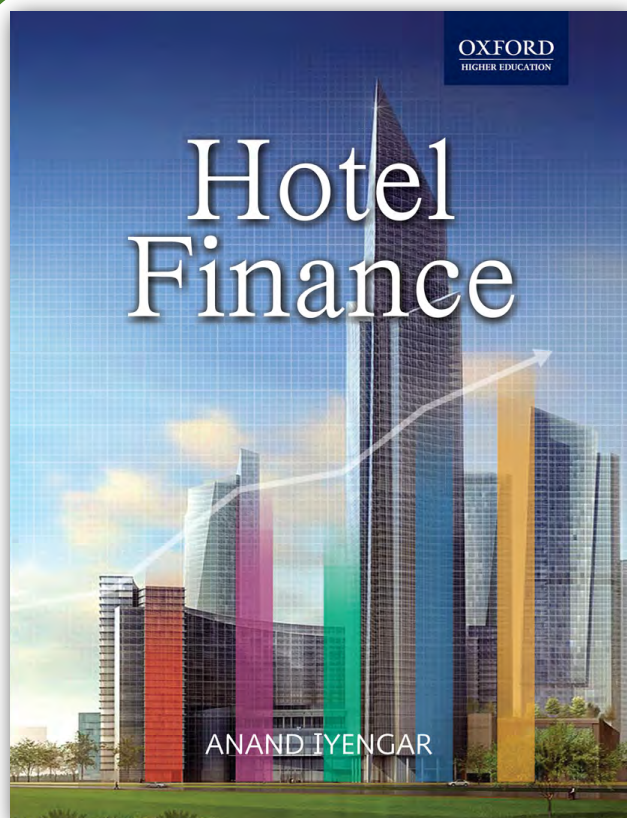
Key Features

- Provides guidelines on how to draft a detailed report for hotel project approval at the planning stage
- Enumerates Indian government rules and American norms for physically challenged guests
- Explains rules and procedures for network analysis and design of network models
- Includes numerous tables and thumb rules to explain key concepts
- Provides end-chapter practical assignments and concept review questions to put learning into practice
- Includes model test papers at the end of the book for self-evaluation

Tarun Bansal is Faculty Coordinator at the Institute of Hotel Management, Catering, and Nutrition, Lucknow. He is a Certified Hospitality Educator (CHE) from the American Hotel and Lodging Association (AHLA).

eISBN: 9780199084067





Hotel Finance

Hotel Finance is a comprehensive textbook designed to meet the needs of students of hotel management and hospitality courses. Written in an easy-to-understand and student-friendly manner, the book provides a thorough understanding of the language and function of finance, which is crucial to being successful and competitive in the industry. The book explores all the relevant theoretical concepts, while incorporating current industry practices.

Beginning with an introduction to financial management, the book explores financial concepts, such as financial analysis and planning, management of working capital and capital budgeting, and long-term financing. Franchising, management contracts, and leasing are some of the special topics covered. Case studies specific to the hospitality industry have been provided to enhance the understanding of the subject.

Key Features

- explains the key concepts through numerous examples, exhibits, tables, and figures
- contains adequate self-test questions in each chapter to assess the level of understanding
- includes solved problems, numerical illustrations, and projects that demonstrate the application of financial principles

Anand Iyengar is a faculty member at the Institute of Hotel Management, Aurangabad. He specializes in accounting and finance, and teaches financial management, financial accounting, and statistics at the undergraduate level. He has eight years of teaching experience and has worked with manufacturing and banking companies of repute.

Print ISBN: 9780195694468

eISBN: 9780199095995



HOTEL FRONT OFFICE Third Edition

The third edition of *Hotel Front Office* is tailored to meet the requirements of students pursuing degree and diploma courses in hotel management. The book aims to explore all the relevant aspects and issues related to front office operations and management in a hotel with the help of numerous industry-related examples, cases, and project assignments. All sections – Hospitality Industry, Front Office Operations, and Front Office Management – have been thoroughly revised and updated for better understanding of the concepts. Due to its exhaustive coverage and practical approach, this textbook will also be suitable for professionals in the hospitality industry.

Key Features

- Discusses the functions of front office operations, and suggests ways and means to make them more effective
- Includes well-illustrated chapters with numerous photographs, flowcharts, illustrations, tables, and examples
- Contains cases to enhance critical thinking and relate concepts to real-life situations

New to the Third Edition

- New sections: Includes new sections on cash and credit control, training and development of front office staff, and role of front office personnel in maximizing revenue
- Revised exercises: Provides new multiple-choice questions at the end of each chapter to facilitate understanding of the readers
- New Chapter: Contains a new chapter on COVID-19 protocols

Praise for the Book

'The content is very well organized and syllabus-oriented'

— Prof. Pramod Sahni, IHM Hajipur, Bihar

'Chapters are comprehensive and dealt with in sufficient detail'

— Dr. Seema Zagade, Maharashtra State Institute of Hotel Management and Catering Technology, Pune

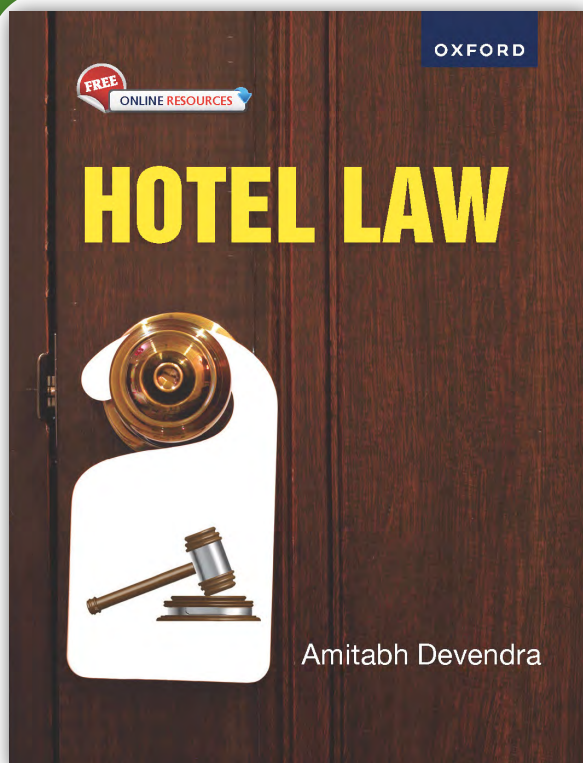
'Practice exercises at the end of each chapter as well as case studies are very good.'

— Prof. Geetika Joshi, Lovely Professional University, Jalandhar

Jatashankar R. Tewari is Associate Professor in School of Tourism and Hospitality Services Management, Indira Gandhi National Open University, New Delhi.

Print ISBN: 9789354978531

eISBN: 9789361030727



Print ISBN: 9780198084013

HOTEL LAW

Hotel Law is a comprehensive textbook specially designed to meet the needs of students of undergraduate and postgraduate hotel management programmes. The book covers the various laws related to the hotel industry and illustrates them through various examples and cases.

The book begins with an introduction to the Indian hospitality industry and hospitality laws. The coverage includes discussion on various laws, such as labour laws, law of torts, Prevention of Food Adulteration Act, 1954 (PFA), the Food Safety and Standards Act of India, 2006 (FSSAI), and liquor licensing. The impact of the environment on hotel operations is also discussed with a special focus on waste management in the different departments of a hotel. Important operational aspects such as doing business in India, business contracts, hotel licenses and permission, as well as insurance are illustrated with numerous industry examples and cases.

Students will find this book useful for its coverage and simple, easy-to-understand, and jargon-free language. The abundance of global and Indian industry-specific cases and examples makes this book highly useful for practitioners as well.

Key Features

- Discusses business contracts, hotel licenses and permissions, hotel insurance, labour laws, food legislation, liquor licensing, and environmental laws
- Refers to the best international legal practices while explaining the Indian legal scenario
- Contains numerous Indian and global examples and real-life cases from the hospitality industry
- Provides contemporary and updated facts, figures, and industry trends
- Includes a glossary of legal terms

Amitabh Devendra is a visiting faculty at FHRAI Hotel School, Greater Noida and the proprietor of Karma Hotels & Hospitality Consultants, Mumbai. He was a guest speaker for the International Hotel Development and Management, India programme for 7 years at The School of Hospitality Business at Michigan State University, USA. He has done his hotel management programme from the Oberoi Hotels and General Manager's Program from Cornell University, USA. Mr Devendra is a certified hotel administrator (CHA) from the American Hotel and Motel Association and has over 33 years of rich experience in the hotel industry spanning renowned hotel chains around the world.

eISBN: 9780199094387



Print ISBN: 9780198069850

HUMAN RESOURCE MANAGEMENT IN HOSPITALITY

Human Resource Management in Hospitality is a comprehensive textbook designed especially for students of hotel management programmes. It explores the core concepts of human resource management (HRM) and uses numerous industry-related examples and case studies to explain them.

Beginning with an introduction to HRM, the book goes on to explore the relevant theoretical concepts, such as manpower planning, recruitment, training, and development. It elaborates on employee motivation, performance appraisal, compensation and benefit management, and job satisfaction. It throws light on organizational culture, conflict management and collective bargaining, Indian labour laws in hospitality, and disciplinary action. The book concludes by looking at contemporary issues such as HR information systems (HRIS) and international HRM.

With its practice-oriented approach, the book will be equally useful to HR professionals in the hospitality industry.

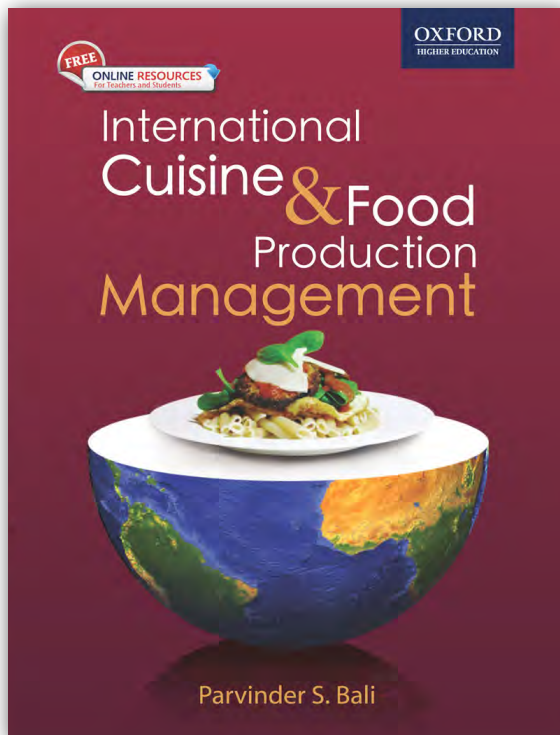
Key Features

- provides guidelines on the practical aspects of HRM in the hospitality industry
- contains numerous examples, figures, tables, templates, and diagrams
- provides a holistic view of the subject by taking into account the various aspects of organizational behaviour
- discusses specific laws related to the hospitality industry
- includes appendices on abusive supervision and counterproductive behaviour

Malay Biswas, PhD, is Assistant Professor (Organizational Behaviour/Human Resource Management) at the Indian Institute of Management (IIM), Rohtak, and earlier worked as Dean – Management Studies at the Institute of Hotel Management, Aurangabad, Maharashtra. He has over 18 years of experience in the hospitality industry and teaching. He worked with the Taj Hotels Resorts and Palaces in their various human resource functions before choosing to be an academic. Dr Biswas specializes in organizational behaviour, human resource management, research methodology, and business ethics. Dr Biswas has published several papers and reports in the areas of his expertise in international and national journals.

eISBN: 9780199084159





Print ISBN: 9780198073895

International Cuisine & Food Production Management

International Cuisine and Food Production Management is a comprehensive textbook specially designed for the final year degree/diploma students of hotel management. The book explores key concepts and illustrates them through numerous figures, photographs, and tables.

Divided into four parts, the first part elaborates Western cuisine (cold section) and covers larger, charcuterie and pâtés, appetizers and garnishes, sandwiches, and use of herbs and wines in cooking. The second part throws light on a variety of international cuisines such as Italian, Mediterranean, Mexican, French, British, Scandinavian, German, Chinese, Japanese, and Thai, and also discusses Western plated food and health food. The third part discusses advanced confectionery and includes cakes and pastries, chocolates, desserts, sauces and coulis, and cookies and biscuits. The final part discusses production management and research and new product development.

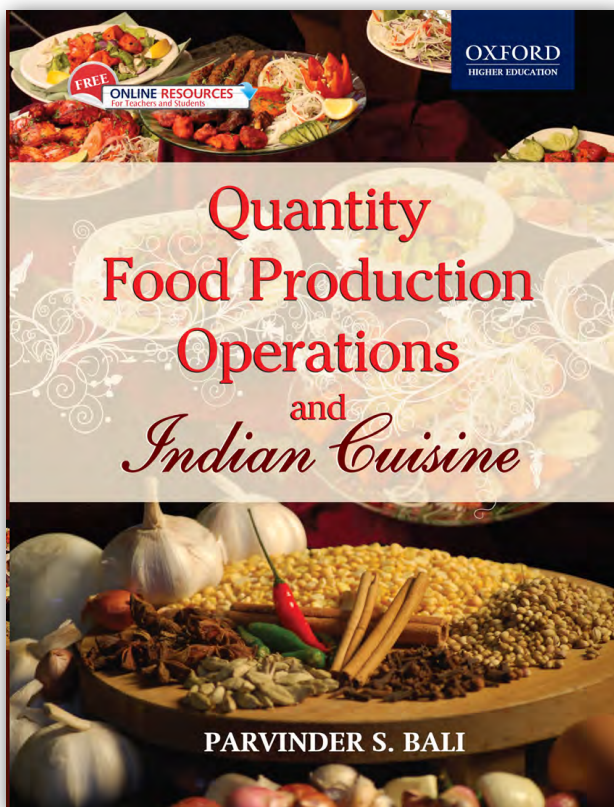
The book will also serve as a handy tool for chefs with its coverage of topics and the various recipes, besides students.

Key Features

- Elaborates on the culinary history, regions, specialties, and famous dishes of various international cuisines such as Western, European, and Oriental
- Devotes a complete part to advanced confectionery including cakes, pastries, chocolates, desserts, cookies, and biscuits
- Includes key managerial issues such as production planning and scheduling, production quality and quantity control, forecasting and budgeting, menu costing, yield management, and new product development
- Includes 16 colour plates

Chef Parvinder S. Bali is Corporate Chef—Learning and Development at the Oberoi Centre of Learning and Development (OCLD), New Delhi. He is a certified hospitality educator from the American Hotel and Lodging Association (AHLA), a certified professional chef from the Culinary Institute of America, and also a certified chef de cuisine from the American Culinary Federation. He has authored *Food Production Operations* and the prestigious Gourmand World Cookbook Awards winner for the best professional book from India, *Quantity Food Production Operations and Indian Cuisine* (both published by OUP).

eISBN: 9780199084241



Print ISBN: 9780198068495

Quantity Food Production Operations and Indian Cuisine

Quantity Food Production Operations and Indian Cuisine is a comprehensive textbook specially designed for students of hotel management. It aims to familiarize the readers with the fundamentals of volume cooking and Indian cuisine. The first four chapters of the book introduce us to volume cookery and discuss the various types of volume catering establishments. The different purchase systems, modification of recipes for volume catering, optimum utilization of space for volume cooking, along with selection of appropriate equipment and staffing are also elucidated.

The later portion of the book deals with the culinary diversity of India and the influence of history, geographical location, festivals, and other factors on the various regional cuisines. Students will also learn about Indian sweets and street food, along with ancient cooking forms, such as *dum* and *tandoor* cooking. The growing demand for food that tastes like it was cooked at home (*ghar ka khana*) in hotels and restaurants is also addressed in detail.

With its up-to-date coverage and practice-oriented approach, the book would be useful to aspiring chefs as well as practitioners besides students.

Key Features

- Concepts supported by suitable photographs including 32 colour plates
- An appendix on internship training in hotels
- Recipes of various Indian cuisines provided in the Online Resource Centre

This book is

Winner of Best Professional Book from India, Gourmand Awards, 2011

Chef Parvinder S. Bali is Corporate Chef—Learning and Development at the Oberoi Centre of Learning and Development (OCLD), New Delhi. A certified hospitality educator (CHE) from the American Hotel and Lodging Association (AHLA), he is also a certified professional chef from the Culinary Institute of America and a certified chef de cuisine from the American Culinary Federation.

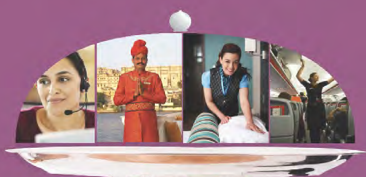
He is also the author of *Food Production Operations* and *International Cuisine & Food Production Management*, both published by OUP.

eISBN: 9780199084128

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SOFT SKILLS FOR HOSPITALITY



Amitabh Devendra

SOFT SKILLS FOR HOSPITALITY

Soft skills are personal attributes that enhance an individual's interactions, job performance, and career prospects. *Soft Skills for Hospitality* is a comprehensive textbook designed for students of hospitality management from diverse sectors.

The book is divided into eight chapters. *Chapter 1* analyses the importance of soft skills in the service industry. *Chapter 2* focuses on self-management skills and is based on the premise that self-assessment by individuals is an important aspect of survival and growth in the industry. *Chapter 3* discusses diverse skills associated with various forms and types of communication in the corporate setup. *Chapter 4* deals with issues related to critical thinking and problem-solving in various challenging situations. *Chapter 5* analyses the crucial skills related to negotiation and conflict resolution. *Chapters 6, 7, and 8* of the book discuss leadership, teamwork, and sales and marketing skills.

Besides students, the book with its practice-oriented approach will be of help to hospitality professionals.

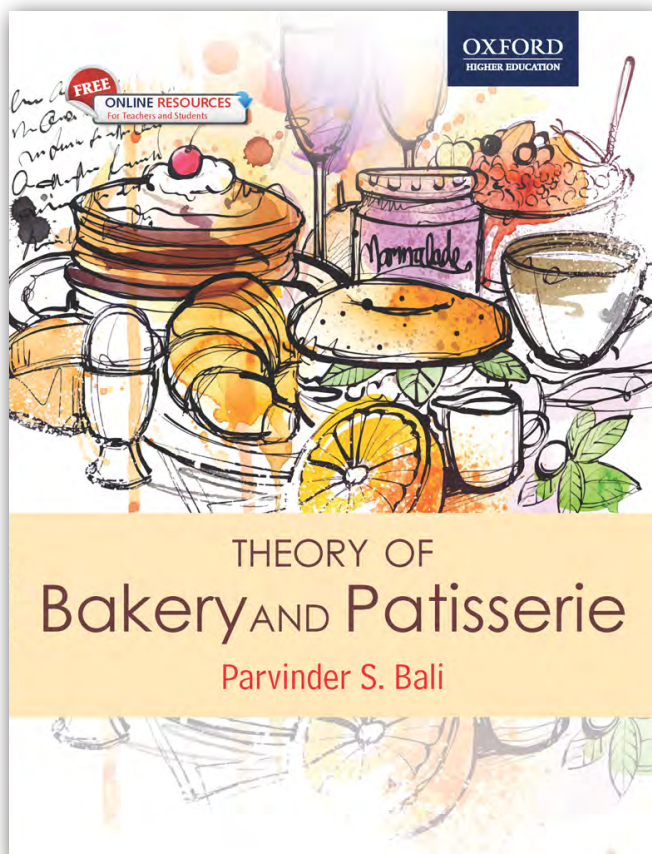
Key Features

- Provides easy and engaging presentation interspersed with numerous examples, tips, and strategies
- Includes case studies on soft-skills related challenges through diverse situations such as negotiating in a global environment, avoiding miscommunication at work, marketing local products amidst linguistic diversity, leading mergers and acquisitions
- Presents Practitioner Insights by industry leaders from renowned institutions such as *The Leela*, *Michigan State University*, *Lemon Tree Hotels* among others

Amitabh Devendra is the Secretary General of Federation of Hotel and Restaurants Associations of India (FHRAI). He is a certified hotel administrator (CHA) from the American Hotel and Motel Association and has nearly four decades of rich experience in the hospitality industry. He is also the author of the OUP title *Hotel Law*.

Print ISBN: 9780199458844

eISBN: 9780199094264



THEORY OF Bakery AND Patisserie

Parvinder S. Bali

THEORY OF Bakery AND Patisserie

Theory of Bakery and Patisserie is designed for students of Diploma and Food Craft courses in Hotel Management. The book covers the syllabus of National Council for Hotel Management and Catering Technology, and elaborates on the concept of bakery and confectionary, detailing the commodities, techniques as well as equipment used in bakery and pastry. It also throws light on some of the popular Indian sweets.

The book begins with an introduction to bakery and pastry making along with the key terms used in the industry. It then details the role of ingredients in preparing bakery and pastry items. From bread fabrication to sugar confections to the various methods used for pre-preparation of breads and pastries such as sifting, autolysis, piping, and whipping, the book has been planned to provide a detailed understanding of all the processes of bakery. Various cold and hot desserts, and their different types such as fruit based, deep fried, frozen, jellies and more have been discussed at length. Common faults while preparing cakes, cookies, sauces, etc., have been discussed for the benefit of students and young professionals.

Key Features

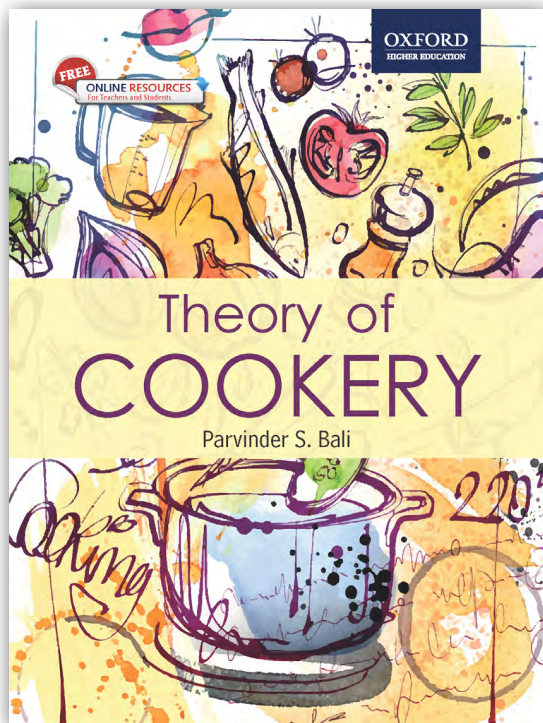
- Discusses basic commodities, equipment, and creams and sauces such as marzipan, crème chantilly, meringue and many more used for baking in detail
- Provides important points and techniques (chef's tips) interspersed in the text to help the students to be more efficient, prepare better products, and avoid accidents in the kitchen
- Describes the basic operations of the halwai section of any hotel as well as the diversity in sweets of India
- Explains practical aspects of bakery with photographs, tables, and figures.
- Includes assessment tools such as objective and essay type questions and activities at the end of the chapters

Parvinder S. Bali is Corporate Chef, Learning and Development, at the Oberoi Center of Learning and Development (OCLD), New Delhi.

Print ISBN: 9780199488797

eISBN: 9780199094530





Theory of COOKERY

Theory of Cookery is designed for students of diploma and food craft courses in hotel management. Catering to the syllabus of National Council for Hotel Management and Catering Technology, the book elaborates on the concept of cookery, methods of cooking, and various features of a professional kitchen.

The book begins with an introduction to cookery, standards of personal hygiene, protective clothing, and safety procedure in handling equipments which a chef needs to maintain. It also gives an overview of the origin of modern cookery and provides a list of culinary terms. Following this, the book discusses organizational structure and layout of a professional kitchen, along with duties and responsibilities of various chefs. Basic menu planning, aims and methods of cooking food as well as commodities used for cooking have been explained at length too. The book also includes chapters on salads, soups, eggs, meat, and fish cookery.

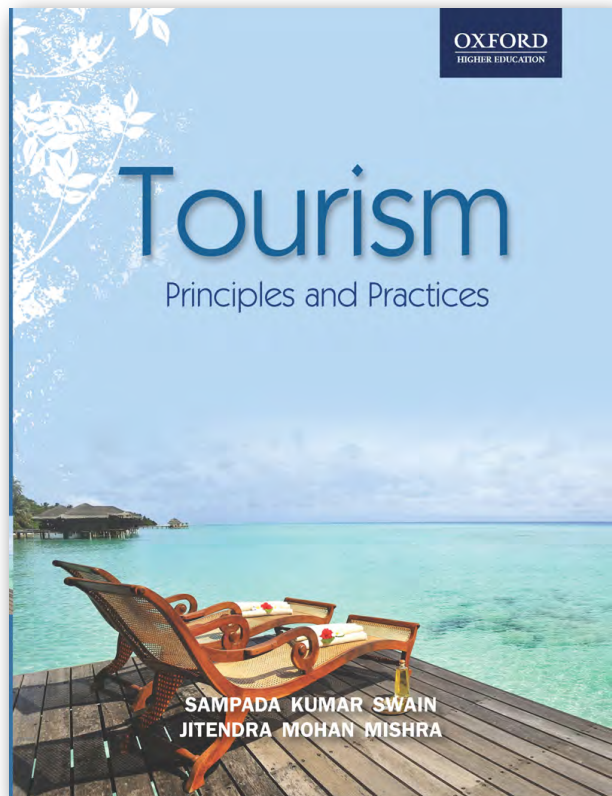
Key Features

- Discusses roles of various commodities used in cooking along with different methods of cooking such as sautéing, steaming, braising, microwave cooking and more in detail
- Provides important points (chef's tips) interspersed in the text to avoid accidents in the kitchen
- Explains practical aspects of cookery with photographs, tables, and figures
- Includes assessment tools such as review questions and project assignments

Parvinder S. Bali is Corporate Chef, Learning and Development, at the Oberoi Center of Learning and Development (OCLD), New Delhi.

Print ISBN: 9780199474448

eISBN: 9780199094271



Tourism Principles and Practices

Tourism—Principles and Practices is a comprehensive textbook, designed especially for undergraduate and postgraduate students of travel and tourism studies. It focuses on a wide array of concepts, principles, and practices in tourism and is supplemented with numerous exhibits, examples, illustrations, and cases.

Divided into five parts, the book covers every aspect of the tourism trade. The first part is devoted to the concepts, history, motivation, and impacts of tourism. The second part discusses basic tourism services like passenger transport, hospitality, travel agency, tour operations, and the ancillary tourism sector. The third part throws light on the demand and supply components of the tourism business. In the fourth part, the economic and environmental impact of tourism is underlined. The last part is devoted to modern tourism business, with special emphasis on national and international tourism organizations, tourism marketing and research, e-tourism, and contemporary trends and practices.

Besides students, the book will be useful to practitioners like travel agents and tour operators also.

Key Features

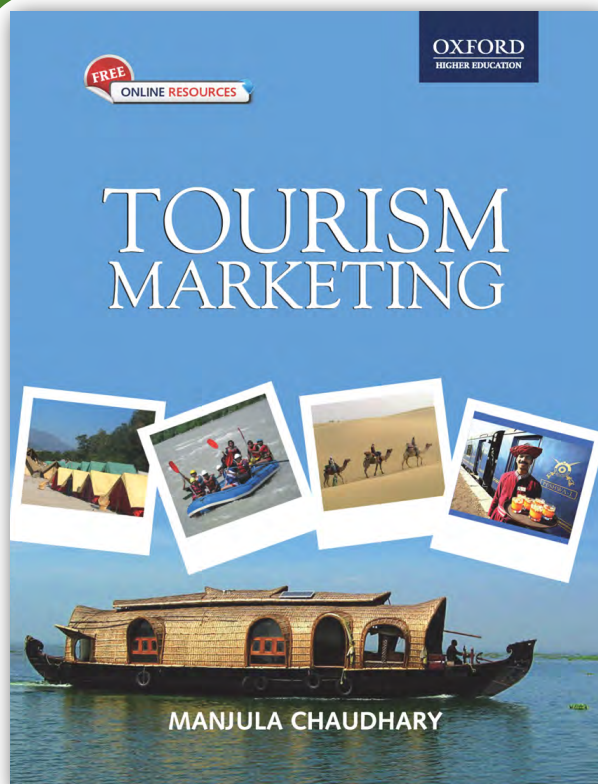
- adopts an integrated multi-disciplinary approach to explain the various dimensions of the tourism business
- includes over 200 exhibits, detailed chapter-end case studies, and project work in all chapters
- contains detailed cases on Indian and global travel organizations such as IRCTC, Jet Airways, Amadeus, IATA, and SOTC and also cases on the latest trends in tourism, such as medical tourism and branding Indian tourism
- includes eight colour pages of photographs of various tourist destinations

Sampada Kumar Swain is Professor, Department of Tourism and Hospitality Management, Indira Gandhi National Tribal University, Amarkantak, Madhya Pradesh. He has rich experience in the tourism industry and has a teaching experience of 15 years. He has undergone a faculty development programme in IIM, Indore. Dr Swain is a member of the board of studies of various universities.

Jitendra Mohan Mishra is Assistant Professor in the Department of Tourism Studies, School of Management, Pondicherry University, Puducherry. He has two years of industrial experience and more than five years of teaching and research experience. Dr Mishra is currently involved in an ecotourism research project.

Print ISBN: 9780198072362

eISBN: 9780199084227



Print ISBN: 9780198066309

TOURISM MARKETING

Tourism Marketing is a comprehensive textbook specially designed for students of tourism and hospitality management. It provides a balanced approach to the subject, covering all the key concepts, and is well supported by examples, illustrations, and cases.

The book begins by introducing the subject of tourism marketing and its related concepts, bringing forth the challenges associated with this field. The book goes on to elaborate on the environment of tourism marketing, market segmentation, targeting, and positioning. Also discussed are the process of tourism marketing, the competitive marketing strategies, and the dynamics of tourism marketing. Separate chapters on tourism product, distribution, pricing, promotion, and people in tourism detail the strategies of promoting products and the various distribution channels. The book concludes with a discussion on the latest developments in the field, including the impact of technology on tourism marketing.

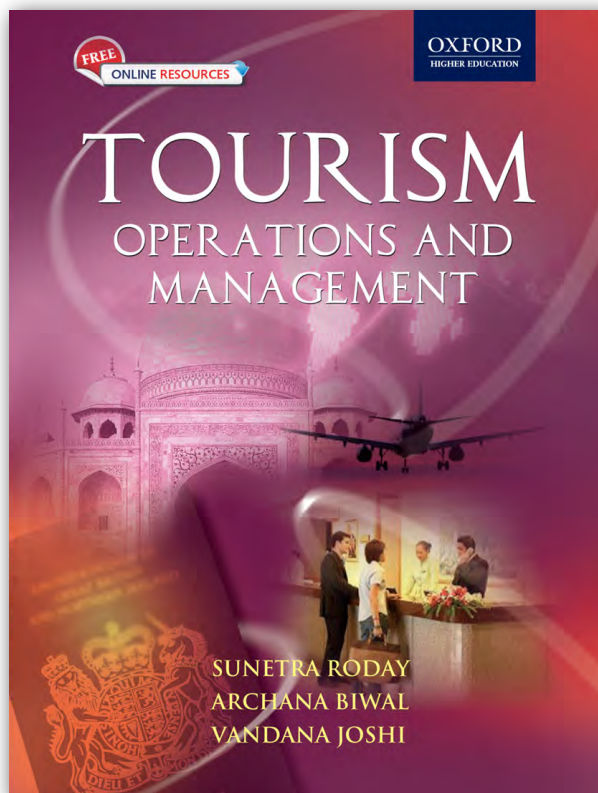
Owing to the inclusion of practical applications, the book would also be useful for practising tourism professionals.

Key Features

- Provides numerous tables and figures to explain the processes involved in tourism marketing, making learning more interesting
- Includes comprehensive case studies at the end of the book, illustrating real-life strategies related to tourism marketing
- Discusses marketing management information system (MMIS) and the various methods of demand forecasting

Manjula Chaudhary is Professor, Department of Tourism and Hotel Management, Kurukshetra University, Haryana. A PhD in management from Kurukshetra University, she has contributed articles to many national and international publications.

eISBN: 9780199084081



Print ISBN: 9780198060017

TOURISM OPERATIONS AND MANAGEMENT

Tourism Operations and Management is a comprehensive textbook, designed for students of hotel management and tourism. The book explores core concepts of tourism and explains them through numerous examples, illustrations, tables, and photographs.

Beginning with an introduction to the travel and tourism industry, the book goes on to discuss various types of tourism, tourism infrastructure, telecommunications, tourist transport, and Indian and international tourism organizations. The book explains how to set up travel agencies and tour operations and their role in the tourism industry. Key topics, such as tourism product, tourism marketing, customer service skills, economic, environmental, sociocultural, and political impacts of tourism, and planning, managing, and developing a tourist attraction are discussed at length. The emerging trends in tourism, such as GDS, e-ticketing, and web marketing are also explored.

Practical operational aspects such as those related to travel regulations, airline geography, and itinerary planning are also discussed. With its practice-oriented approach, the book would also be useful to practitioners such as travel agents and tour operators, besides students.

Key Features

- Explains important concepts of tourism operations and management through industry-related examples, formats, and photographs.
- Includes topics such as travel formalities and regulations, customer service skills, tourism marketing, impact of tourism, and emerging trends in tourism.
- Covers operational areas such as setting up travel agencies and tour operations and planning itineraries.

Sunetra Roday was formerly Principal of the Maharashtra State Institute of Hotel Management & Catering Technology (MSIHMCT), Pune. She has a master's degree in tourism management and has a teaching experience of over 25 years. She is actively involved in consultancy projects and curriculum development of the travel and tourism programme, and has travelled widely in India and abroad. She has published a number of books.

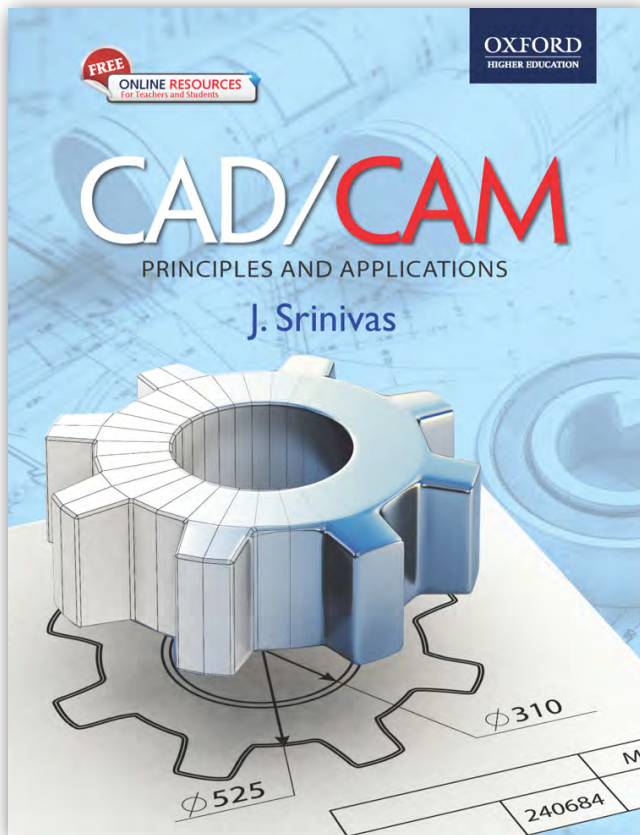
Archana Biwal is a faculty member at MSIHMCT, Pune. She has six years of teaching experience and four years of industry experience in a travel agency.

Vandana Joshi is a faculty member at MSIHMCT, Pune. She has six years of teaching experience and over four years of industry experience. She is a certified guide trainer.

eISBN: 9780199083985



MECHANICAL



Print ISBN: 9780199464746

CAD/CAM

PRINCIPLES AND APPLICATIONS

CAD/CAM: Principles and Applications is primarily designed to serve as a textbook for undergraduate students of mechanical and allied engineering disciplines.

The book focuses on the classical concepts and developments in the area of CAD/CAM. It has 15 chapters along with a few appendices addressing the requirements of both academicians and industrial practitioners. The concept of CAD/CAM along with the hardware and software configuration is explained in the first two chapters. The next five chapters focus on computer aided drafting and modelling, representation of curves, and visual realism along with analysis and optimization of designs. CAD/CAM standards and basic design evaluation tools are presented in the next two chapters. Various manufacturing practices and group technology is explained thereafter. The book, in its last few chapters, discusses CAM, CIM, Computer-aided Quality Control, and Requirements Planning in detail.

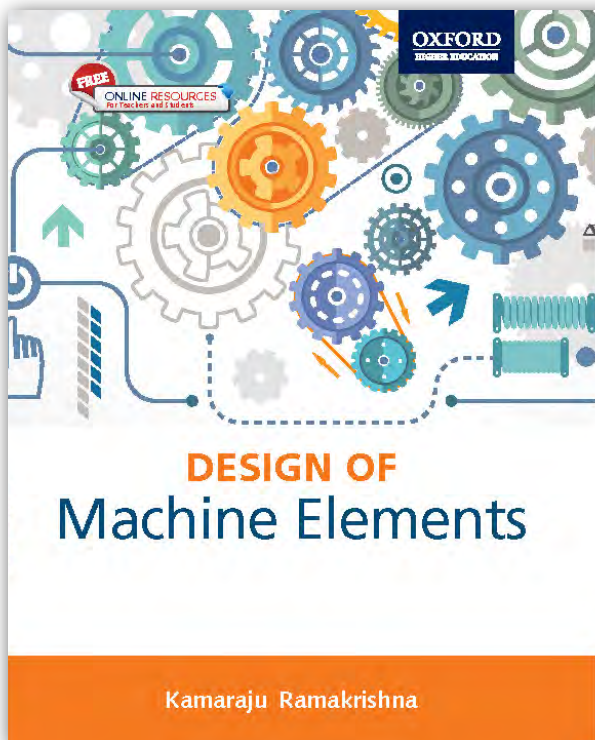
Written in an easy-to-understand and student-friendly manner, the book includes several learning features such as solved examples, exercises, multiple choice questions, and case-studies.

Key Features

- Includes dedicated chapters on mathematical modelling coupled with CAD standards
- Presents FEM and Computer-aided Quality Control as separate chapters with CAM and part programming discussed together
- Provides an exclusive chapter on design evaluation tools dealing with CAD applications in virtual engineering, virtual prototyping, and rapid prototyping
- Contains solved examples, multiple choice questions with answers, and numerical exercises at the end of every chapter
- Explains CAD software tools and CAM interpolation working elaborately.
- Includes elaborate appendices on Solidworks, CNC simulators, Parametric Interpolation in CNC, Reverse Engineering, GUI in MATLAB

J. Srinivas is Associate Professor in the Mechanical Engineering department at National Institute of Technology, Rourkela. A prolific author, his research areas include machine tool dynamics, modelling and analysis with soft computing tools. He has also published several research articles in journals of national and international repute.

eISBN: 9780199098996



Print ISBN: 9780199477647

DESIGN OF Machine Elements

Design of Machine Elements provides a detailed exposition of the principal theories behind the design process and their application in various machine members, including transmission elements and systems. It is written to cater to the students of undergraduate mechanical engineering and allied disciplines for a two-semester course on the subject.

Beginning with a detailed discussion of the underlying principles of materials selection, load, stress analysis, and theories of failure in the first nine chapters, the book in subsequent chapters, applies the learnt principles through various machine members such as welded joints, springs, bearings, gears, and shafts.

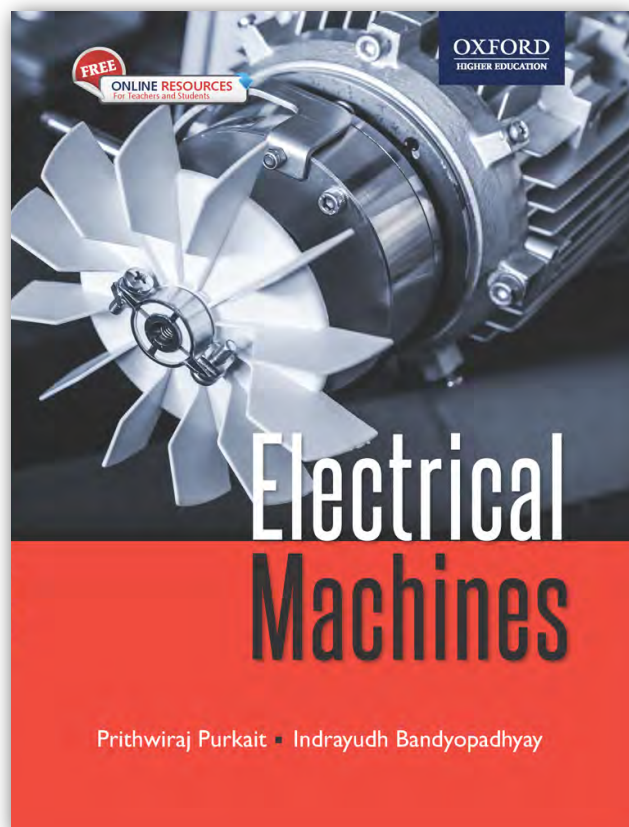
It further provides an exhaustive coverage of the design application of various transmission elements such as belts, pulleys, flywheels, gear boxes, and automobile transmission.

Key Features

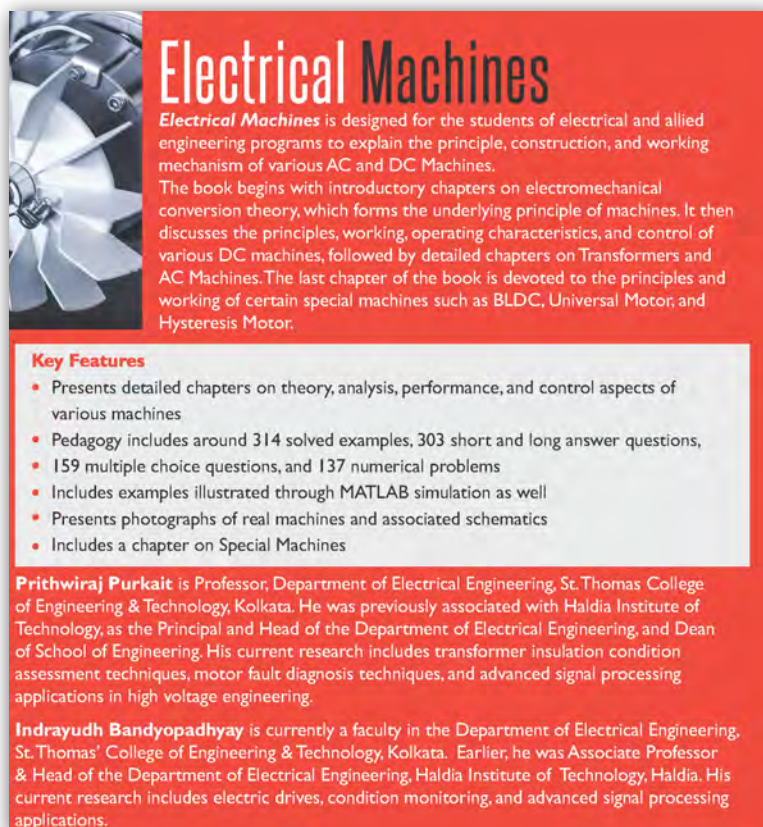
- Provides a solution outline listing the steps to be followed for arriving at the desired solution for select complex problems
- Presents more than 360 solved examples and as many as 350 numerical exercises
- Includes more than 370 multiple-choice questions and plenty of review questions
- Includes exclusive chapters on piping, which assumes significance in transportation of fluids, and machine tool beds and slideways that provide a quick overview of machine tool design
- Includes photographs of various machine components that are directly relevant to the discussion

Kamaraju Ramakrishna is Senior Professor of Mechanical Engineering, Gayatri Vidya Parishad College of Engineering, Madhurawada, Visakhapatnam. He has more than 45 years of combined teaching and industry experience.

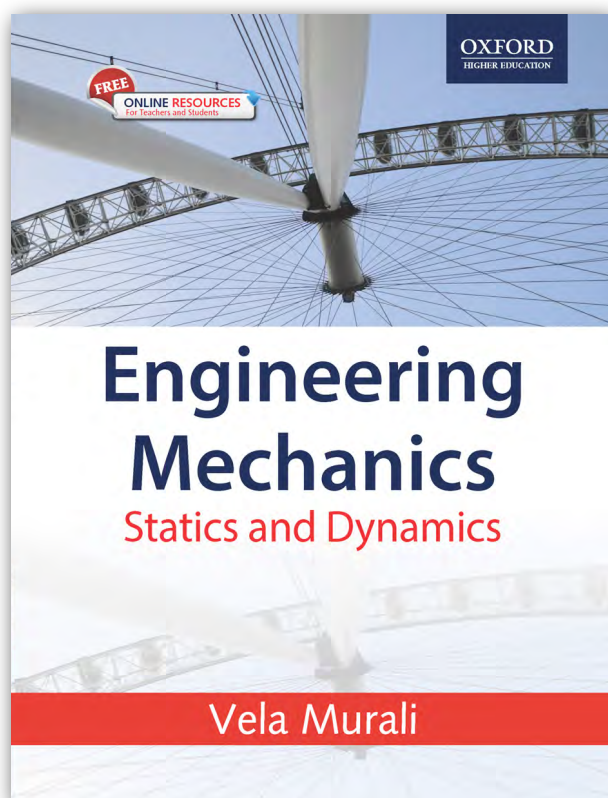
eISBN: 9780199098965



Print ISBN: 9780199472635



eISBN: 9780199098941



Engineering Mechanics

Statics and Dynamics

Vela Murali

Print ISBN: 9780199494613

Engineering Mechanics

Statics and Dynamics

Engineering Mechanics: Statics and Dynamics is specially designed for a one-semester interdisciplinary course offered to the first-year engineering students pursuing an undergraduate engineering programme.

The book addresses both statics and dynamics—the integral parts of rigid body mechanics. Beginning with the basics of the subject, the book delves into concepts of equilibrium, properties of surfaces and solids, friction, and dynamics of particles and rigid bodies. It employs a problem-solving approach that helps students discover, explore, and connect with the subject and also provides rich pedagogical support.

Key Features

- Adopts simple algebraic methods of solving problems in the place of the conventional vectorial method, wherever possible
- Uses a simple and direct style of writing with effective terminologies and nomenclatures to explain the concepts
- Incorporates 'quadrant approach' to resolve forces that act on planes
- Provides numerous solved examples and exercises with hints for practice

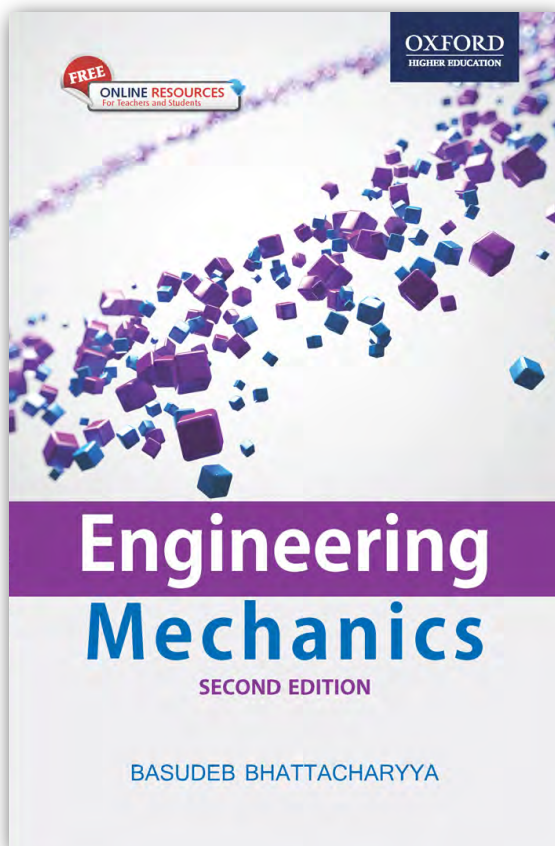
Vela Murali is Professor of Mechanical Engineering and Former Head of the Engineering Design Division, College of Engineering, Guindy, Anna University, Chennai. A PhD from the National University of Singapore, he has more than 25 years of experience in teaching various undergraduate and postgraduate mechanical engineering courses.

He has done extensive research in the areas of fracture, fatigue, composite materials, and applied mechanics, and has published many articles in national and international journals of repute. He has also co-authored a book on Engineering Drawing, published in 2015, by Oxford University Press, India.

eISBN: 9780190994044



TOC list



Print ISBN: 9780198096320

Engineering Mechanics

SECOND EDITION

The second edition of *Engineering Mechanics* is specially designed as a textbook for undergraduate students of engineering. It provides a detailed and holistic treatment of the basic theories and principles of both statics and dynamics.

Starting from the fundamental concepts of force and equilibrium along with free body diagrams, this book comprehensively covers the various analytical aspects of rigid body mechanics, including a suitable discourse on simple lifting machines. Within each chapter, the simpler topics and problems precede those that are more complex and advanced. Each chapter starts with the key concepts and gradually builds up on the advanced topics using detailed and easy-to-understand illustrations.

New to the Second Edition

- A chapter on simple lifting machines
- Additional topics such as parabolic and catenary cables, product and principal moment of area, stability of equilibrium, equations of motion with variable acceleration, angular impulse, and angular momentum
- Numerous illustrations, solved problems, review questions, numerical problems
- Two new appendices—Appendix A on the timeline of important discoveries and inventions in classical mechanics and Appendix H on shear force and bending moment

Key Features

- Basic concepts of statics and dynamics are presented using the vector approach.
- Dynamics of particles and dynamics of rigid bodies are covered separately.
- Large number of solved examples and numerous illustrations are provided to reinforce the understanding of theoretical concepts.

Praise for the First Edition

The book is written in lucid and simple English and covers a combination of chapters not found in conventional books on the subject.

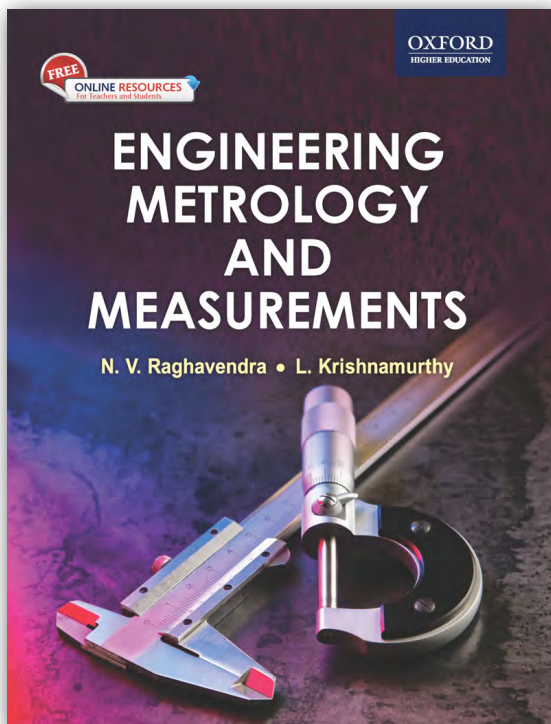
— Dr Madhujit Mukhopadhyay (Formerly at IIT Kharagpur)

This book would be of immense help to the students not only in appreciating the fundamentals of engineering mechanics but also in laying concrete foundation for other engineering subjects.

— Dr Amitava Dasgupta (Formerly at BESU, Shibpur)

Dr Basudeb Bhattacharyya is currently Associate Professor, Department of Aerospace Engineering and Applied Mechanics, Indian Institute of Engineering Science and Technology (previously Bengal Engineering and Science University), Shibpur and has over 19 years of teaching experience. He has also authored several other books with OUP, including *Machine Drawing* (2011).

eISBN: 9780199083565



Print ISBN: 9780198085492

ENGINEERING METROLOGY AND MEASUREMENTS

Engineering Metrology and Measurements is a textbook designed for students of mechanical engineering and allied disciplines to help them understand the various shop floor measurement techniques and the basics of mechanical measurements.

Beginning with a conventional introduction to the principles and standards of measurement, the book takes the reader through important topics of metrology such as limits, fits and tolerances, linear measurements, angular measurements, comparators, optical measurements, inspection, and quality control. The last few chapters discuss the measurement concepts of simple physical parameters, such as force, torque, strain, temperature, and pressure, before introducing the contemporary topic of nanometrology in the last chapter.

Adopting an illustrative approach to explain the concepts, the book presents solved numerical problems, practice problems, review questions, and multiple-choice questions.

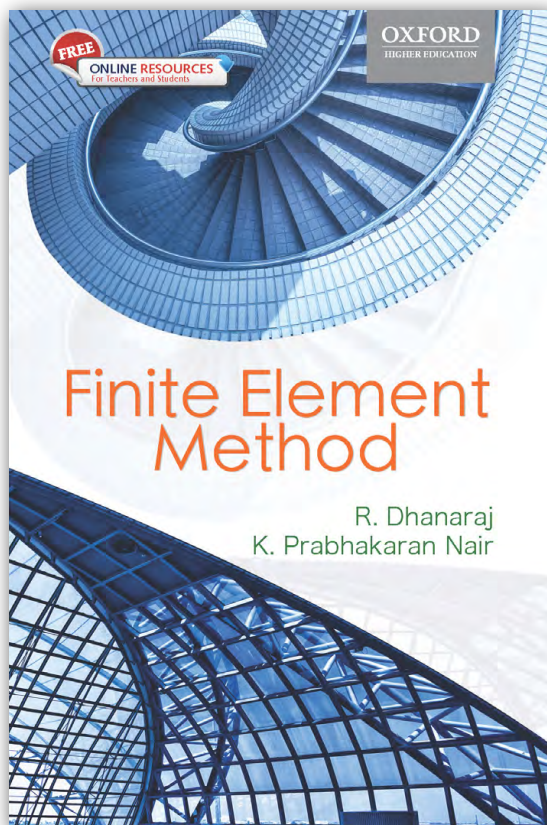
KEY FEATURES

- Provides coverage of both metrology and mechanical measurements in one volume to suit the needs of different syllabi
- Offers guidelines for the proper use and maintenance of important instruments such as vernier calliper, autocollimator, slip gauge, and pyrometer
- Provides numerous solved examples, review questions, and multiple-choice questions with answers in every chapter, and numerical exercises in all relevant chapters
- Discusses the principles of nanometrology as an exclusive chapter
- Includes an appendix containing 20 laboratory experiments with photographs of related equipment, wherever relevant, and comprehensive procedures, observation templates, and model characteristics

N.V. Raghavendra is Professor and Head, Department of Mechanical Engineering, National Institute of Engineering, Mysore. He has more than 30 years of teaching and research experience.

L. Krishnamurthy is Professor, Department of Mechanical Engineering, National Institute of Engineering, Mysore. He has more than 25 years of teaching cum research experience.

eISBN: 9780199094554



Print ISBN: 9780198073901

Finite Element Method

Finite Element Method is designed as a textbook for the undergraduate mechanical and civil engineering students illustrating solutions to a wide variety of engineering problems involving structural mechanics and fundamental heat transfer.

The book begins with an introductory chapter on the finite element methods, and provides a solid foundation to the subject, in subsequent chapters, by addressing 1D, 2D, truss, beam and frame, and isoparametric elements, and discussing applications to scalar problems and dynamic and stability analysis. It then discusses applications of finite element methods to structural mechanics and 1D and 2D heat flow. It also explores the recent trends in the subject such as meshless methods, material non-linearity, and contact problems.

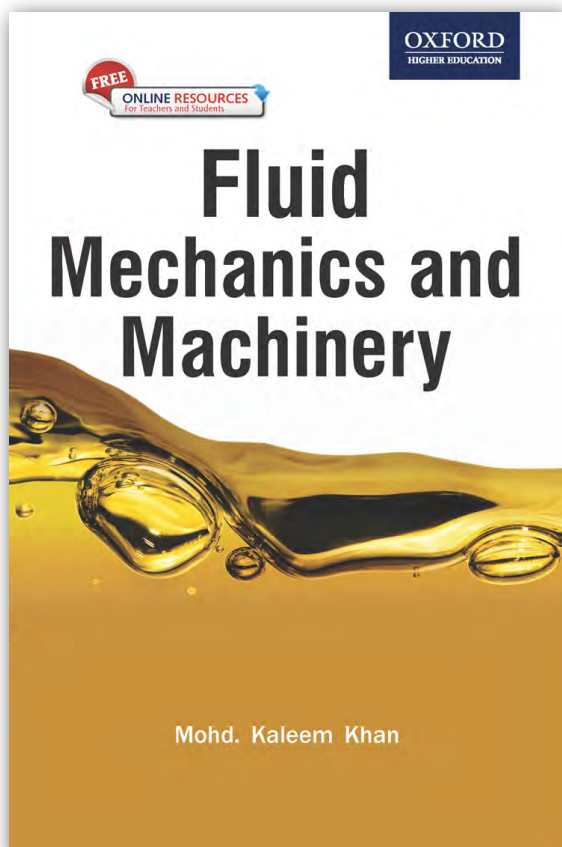
Key Features

- Provides an understanding of the simplicity and advantage of using finite element method over other approximation methods.
- Compares finite element method and conventional method for select problems in 1D structural mechanics and heat transfer.
- Follows the model of pre-processing, processing, and post-processing in solving example problems, which is very similar to a typical finite element software package.
- Includes determination of buckling load of columns using finite element method
- Contains over 70 example problems, 100 exercises and a separate set of example problems solved through ANSYS in all relevant chapters.

R. Dhanaraj is currently Professor of Eminence, Department of Aerospace Engineering, Madras Institute of Technology Campus, Anna University, Chennai.

K. Prabhakaran Nair is currently Professor, Department of Mechanical Engineering, National Institute of Technology Calicut.

eISBN: 9780199099092



Print ISBN: 9780199456772

Fluid Mechanics and Machinery

Fluid Mechanics and Machinery is a textbook designed for students of civil and mechanical engineering. It provides a clear understanding of the behaviour of fluids at both rest and motion, and further conversion into useful work.

Using an experimental and demonstrative approach to explain concepts, the initial chapters of the book discuss the fundamental physics of fluids such as statics, kinematics, conservation equations, and boundary layer. The book, in subsequent chapters, presents the behaviour of fluids in pipe flow, open channel flow, and flow of compressible fluids, followed by an exclusive chapter on fluid machinery. Dimensional Analysis and Similitude, a concept to enhance analysis of units of different physical quantities and their interrelationships, is discussed as the last chapter.

Key Features

- Provides detailed step-by-step derivation of important mathematical theories like the Rayleigh flow
- Analyses various flow measurement and pressure measurement techniques
- Each chapter includes numerous solved examples and ends with exercises such as multiple-choice questions, review questions, and numerical problems along with answers
- Presents experimental results as a demonstrative feature to further simplify related discussions within the chapters
- Provides a glossary at the end of the book for the viva voce examination and technical interview preparations

Mohd. Kaleem Khan is currently Associate Professor, Department of Mechanical Engineering, Indian Institute of Technology, Patna.

eISBN: 9780199090129





Print ISBN: 9780198079972

Heat Transfer SECOND EDITION

The second edition of *Heat Transfer*, with significantly expanded coverage including a new chapter, is a comprehensive textbook aimed at undergraduate students of mechanical, chemical, metallurgical, and aerospace engineering. It will also serve as a useful text to postgraduate students specializing in thermal sciences, and for practising engineers and researchers.

The book provides an exhaustive coverage of two- and three-dimensional heat conduction, forced and free convection, boiling and radiation heat transfer, heat exchangers, mass transfer, and computer methods in heat transfer. The main emphasis is on fundamental concepts and their application to complex problems.

Key Features

- Emphasizes the fundamental concepts with easy-to-understand mathematics
- Provides detailed solution methodologies
- Includes a detailed coverage of the computer methods in heat transfer
- Reinforces theoretical concepts through numerous solved examples

New to the Second Edition

- Contains a new chapter on solidification and melting
- Includes new sections such as heat generation in a solid sphere, flow regimes in free convection over a vertical plate, and formation of vapour bubbles
- Provides new solved problems and review questions
- Includes recapitulation of important concepts and formulae
- Contains new appendices, namely the thermophysical properties of water at atmospheric pressure and the solutions of finite-difference problems in heat conduction

Praise for the First Edition

The book offers a problem-solving methodology that encourages systematic thinking. Difficulty level of the problems is good and will help students to build on acquired knowledge.

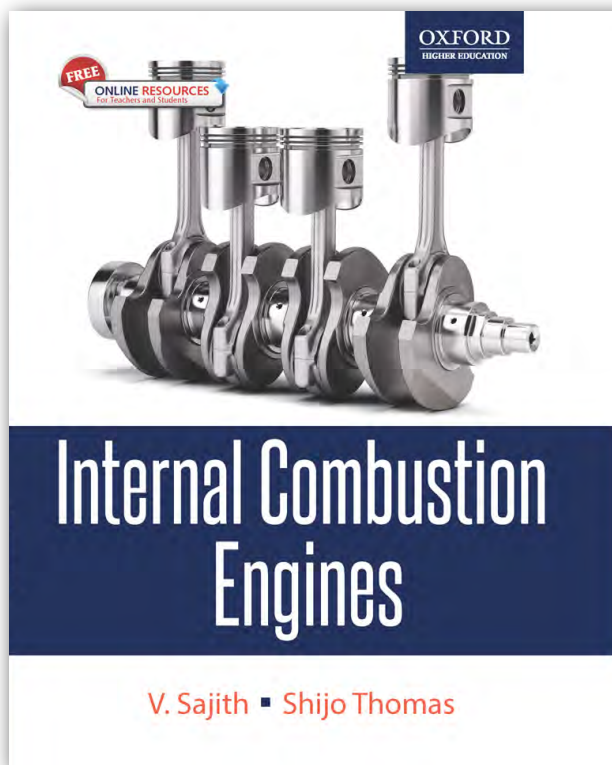
—Professor Sachin Ulhasrao Belgamwar (BITS, Pilani)

The theory coverage and content presentation are good.

—Dr B. Sudheer Prem Kumar (JNTU College of Engineering, Hyderabad)

P.S. Ghoshdastidar is currently Professor, Department of Mechanical Engineering, Indian Institute of Technology Kanpur.

eISBN: 9780199084364



Print ISBN: 9780199479481

Internal Combustion Engines

Internal Combustion Engines is a textbook designed for the students of mechanical and allied engineering programmes to help them understand the principles, working, and performance of various IC engines.

Beginning with the thermodynamic cycles, the discussion moves onto combustion mechanism, fuels and systems, ignition system, friction and lubrication, and cooling auxiliaries. This is followed by chapters on two-stroke engines, superchargers and turbochargers, air pollution control, and testing and performance. The last chapter deals with the dynamics of exhaust and fresh charge for successive cycles in gas exchange systems.

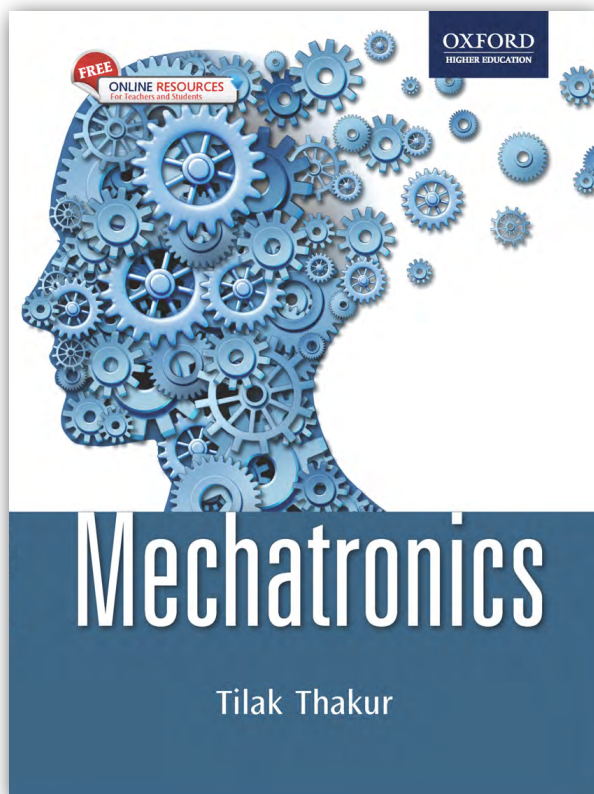
Key Features

- Discusses electronic fuel injection systems such as MPFI, GDI, and CRDI as well as air-assisted fuel injection system.
- Describes the application of nanotechnology in various systems such as cooling, lubrication, and fuel systems.
- Presents flame visualization techniques for combustion analysis, thermodynamic analysis of combustion, and associated heat release.
- Illustrates the concepts through schematics, sectional views, and photographs wherever relevant.
- Includes numerous solved problems along with multiple choice questions (MCQs), theoretical questions, and practice problems.

V. Sajith is Assistant Professor, School of Nano Science and Technology, National Institute of Technology Calicut, Kerala. His teaching and professional experience together spans more than 20 years.

Shijo Thomas is Assistant Professor, School of Nano Science and Technology, National Institute of Technology Calicut, Kerala and has more than 15 years of experience in teaching and research.

eISBN: 9780199098972



Print ISBN: 9780199459629

Mechatronics

Mechatronics is designed to meet the requirements of undergraduate students of mechanical engineering. The book aims at demystifying the subject with its lucidity and comprehensive coverage. It also presents the important concept of the design and development of an automatic/intelligent system for a multidisciplinary environment in an easy-to-understand manner.

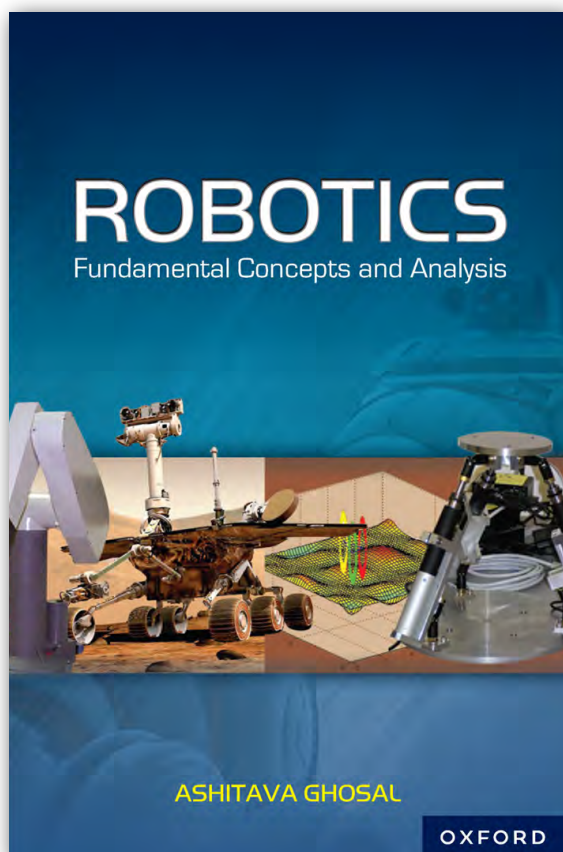
This book provides a step-by-step procedure through chapters, in sequence, to design and develop any mechatronics intelligent system. In addition, several case studies and intelligent projects have been discussed to provide a better understanding of the subject. The text covers all aspects of design and development of an intelligent product with detailed coverage of topics such as system, sensors, and transducers; signal conditioning and signal manipulation; digital circuits and devices; controllers such as microprocessor, microcontroller, and programmable logic controller (PLC); mechanical, electrical, hydraulic and pneumatic actuators, control theory, and robotics. In order to help design a system, advanced topics for system simulation using MATLAB and LabVIEW, product design and development, and fault diagnostics are also covered. The text is supported with numerous solved and unsolved questions.

Key Features

- Includes a dedicated chapter on the design and development of mechatronic systems with numerous case studies and possible design solutions
- Provides product design and development tips in all the relevant chapters
- Includes various illustrations and figures to support the text
- Provides numerous solved examples for a better understanding of the concepts
- Includes summary and glossary in all chapters for quick recapitulation
- Provides multiple-choice questions, review questions, and numerical problems at the end of chapters to test the knowledge and understanding of students

Tilak Thakur is Associate Professor, Department of Electrical Engineering, PEC University of Technology, Chandigarh.

eISBN: 9780199099054



Print ISBN: 9780195673913

ROBOTICS

Robotics: Fundamental Concepts and Analysis is designed to fully meet the requirements of undergraduate students of mechanical engineering for a course in robotics. With the inclusion of some key advanced topics, the book also serves as an introductory text for postgraduate students specializing in robotics.

The book introduces the science and engineering of robotics and provides in-depth coverage of mechanical manipulation. It emphasizes the fundamental mathematical concepts and analytical tools required for a topic, develops the relevant theory and algorithms, and then illustrates the theory with the help of worked-out examples. The book presents all key areas of kinematics, dynamics, and control of manipulators in a single text and treats the kinematics and dynamics of serial and parallel manipulators in a unified way.

Newer robotic architectures such as parallel manipulators, flexible manipulators, and mobile robots have also been discussed at length. The book also uses computational software MATLAB and MAPLE for problem solving. Written in a comprehensive and concise manner, the text is student friendly and includes several examples and exercise problems.

Key Features

- Emphasizes the fundamental concepts and tools for analysis
- Incorporates a lucid style of writing with easy-to-understand mathematics
- Reinforces theoretical concepts through numerous examples
- Includes a large number of end-chapter exercises to test understanding
- Provides insight into advanced topics such as flexible manipulators and mobile robots

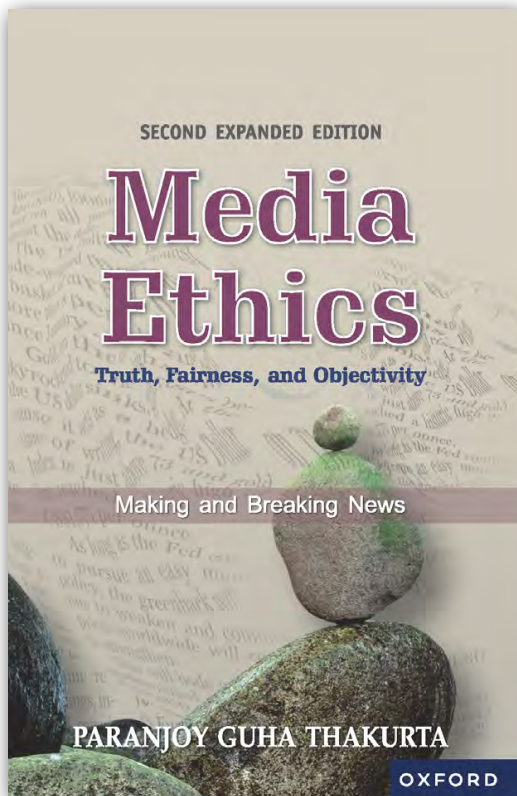
Ashitava Ghosal obtained his BTech in mechanical engineering from the Indian Institute of Technology Kanpur, MS in mechanical engineering from the University of Florida at Gainesville, and PhD from Stanford University, California (USA). Currently Professor at the Indian Institute of Science Bangalore, he has been actively involved in teaching and research both in India and abroad. He has conducted several sponsored research projects funded by the Department of Science & Technology and Indian Space Research Organization.

Professor Ghosal has several research papers in reputed international and national journals to his credit. His research interests include analysis and design of robots and other computer-controlled mechanical systems, mechanical design, and CAD/CAM.

eISBN: 9780199085071



MEDIA



Print ISBN: 9780198070870

Media Ethics

SECOND EXPANDED EDITION

This second expanded edition of *Media Ethics* is aimed at sensitizing aspiring media students to issues faced by working professionals. The book offers a theoretical rationale for acting in an ethical manner and provides practical guidelines as well.

New to this edition

- New chapters on paid news and reality television
- Revised chapters on media market, new media, and ethics of advertising
- New annexures on the scandal surrounding the *News of the World*; reality TV show on engineering education; media coverage of the November 2008 Mumbai attacks; etc.
- New case studies on the murder of Father Mario Ross and the flawed placement of advertising

With its practice-oriented approach, the book would be equally useful to those who are working as journalists and have to frequently confront ethical issues while fulfilling their professional obligations.

Praise for *Media Ethics*, first edition

... the book ends up pretty much as a common man's guide to the media. It is bound to be a welcome resource for India's journalism schools where even the best teachers have to make do with borrowed, western insights.

— Vipul Mudgal in *Hindustan Times*

This is not an arid textbook. It contains a number of case studies from India and abroad, such as the Mumbai blasts and the Anusha Talwar murder case and even the Watergate scandal ... the ethical issues it raises, pointedly and pertinently, make the book ... excellent ...

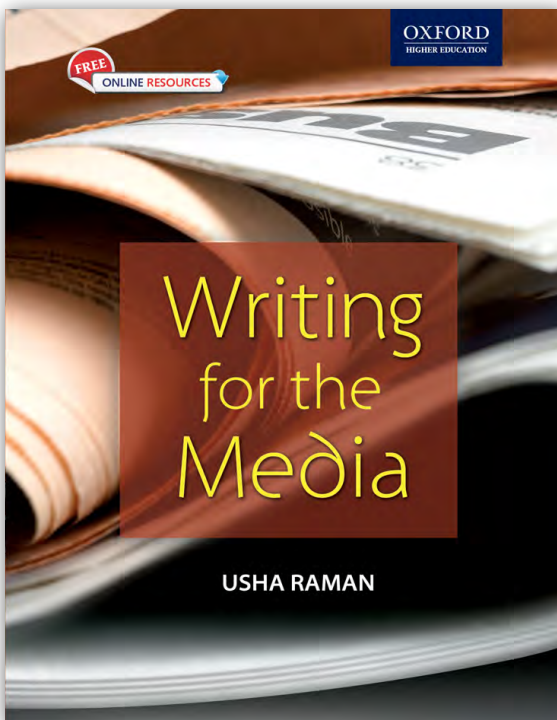
— A.G. Noorani in *Frontline*

The book examines the questions around objectivity, libel, copyright and right to information ... The book will be useful as a textbook for journalism students. Media scholars will also find it useful.

— *Down to Earth*

Paranjoy Guha Thakurta is an eminent journalist with 30 years' experience and has worked across print, Internet, radio, and television media. He has directed documentary films, produced radio programmes, and is a renowned consultant, speaker, and trainer. He also teaches at various educational institutes. He has earlier worked with a number of leading publications including *Business India*, *Business World*, *The Telegraph*, *India Today*, and *The Pioneer*.

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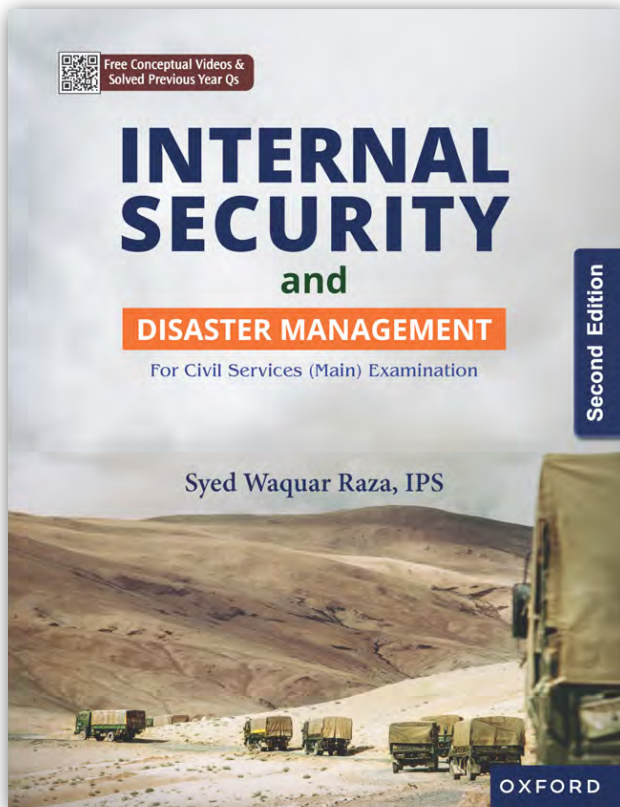
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