Software Engineering By Rajib Mall

Real-Time SystemsFundamentals of Biochemical EngineeringSoftware EngineeringHardware SecuritySoftware EngineeringPANKAJ JALOTE'S SOFTWARE ENGINEERING: A PRECISE APPROACHIntroduction to the Personal Software Process(sm)Software EngineeringSoftware Engg ConceptsAn Integrated Approach to Software EngineeringFundamentals of Solid State EngineeringSoftware EngineeringResource Management and Efficiency in Cloud Computing EnvironmentsThe Essence of Software EngineeringInnovations for Community ServicesChemical Engineering DesignSoftware Project Management in PracticeSoftware EngineeringWriting Compilers and InterpretersSoftware EngineeringMatthews' Plant VirologySoftware Engineering FundamentalsContext-Aware Communication and Computing: Applications for Smart EnvironmentSoftware TestingProceedings of the 11th Innovations in Software Engineering ConferenceFundamentals of Software EngineeringFUNDAMENTALS OF SOFTWARE ENGINEERING, FIFTH EDITIONSoftware Testing and Quality AssuranceEngineering Fundamentals: An Introduction to Engineering, SI EditionSoftware EngineeringSoftware EngineeringComputer Network Simulation Using NS2FUNDAMENTALS OF MOBILE COMPUTING, Second EditionIn Search of BeingSoftware Engineering—Principles and PracticesObject-oriented Software

EngineeringElectronics - Circuits and
SystemsFundamentals of Software
EngineeringProgramming with JavaRecent Advances
in Mathematics, Statistics and Computer Science

Real-Time Systems

This newest book from Watts Humphrey is a hands-on
introduction to basic disciplines of software
engineering. Designed as a workbook companion to
any introductory programming or software-
engineering text, Humphrey provides here the
practical means to integrate his highly regarded
Personal Software Process (PSP) into college and
university curricula. The book may also be adapted
for use in industrial training or for self-improvement
by practicing software engineers. Applying the book's
exercises to their course assignments, students learn
both to manage their time effectively and to monitor
the quality of their work, good practices they will need
to be successful in their future careers. The book is
supported by its own electronic supplement, which
includes spreadsheets for data entry and analysis. A
complete instructor's package is also available. By
mastering PSP techniques early in their studies,
students can avoid--or overcome--the popular
"hacker" ethic that leads to so many bad habits.
Employers will appreciate new hires prepared to do
competent professional work without, as now is
common, expensive retraining and years of
experience.

Fundamentals of Biochemical Engineering

Provides a multidisciplinary introduction to quantum mechanics, solid state physics, advanced devices, and fabrication Covers wide range of topics in the same style and in the same notation Most up to date developments in semiconductor physics and nano-engineering Mathematical derivations are carried through in detail with emphasis on clarity Timely application areas such as biophotonics , bioelectronics

Software Engineering

This book constitutes the refereed proceedings of the 20th International Conference on Innovations for Community Services, I4CS 2020, held in Bhubaneswar, India, in January, 2020. The 16 revised full papers presented in this volume were carefully reviewed and selected from 46 submissions. The papers focus on all aspects of: communities and social networks; information and system security; cloud and network security; communication and networks; and data analytics and e-governance.

Hardware Security

Software Engineering

This work has been updated to include chapters on Web engineering and component-based software engineering. It provides a greater emphasis on UML,

in-depth coverage of testing and metrics for object-orientated systems and discussion about management and tehcnical topics in software engineering.

PANKAJ JALOTE'S SOFTWARE ENGINEERING: A PRECISE APPROACH

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Intended for introductory and advanced courses in software engineering. The ninth edition of Software Engineering presents a broad perspective of software engineering, focusing on the processes and techniques fundamental to the creation of reliable, software systems. Increased coverage of agile methods and software reuse, along with coverage of 'traditional' plan-driven software engineering, gives readers the most up-to-date view of the field currently available. Practical case studies, a full set of easy-to-access supplements, and extensive web resources make teaching the course easier than ever. The book is now structured into four parts: 1: Introduction to Software Engineering 2: Dependability and Security 3: Advanced Software Engineering 4: Software Engineering Management

Introduction to the Personal Software Process(sm)

This new edition of the book, is restructured to trace the advancements made and landmarks achieved in

software engineering. The text not only incorporates latest and enhanced software engineering techniques and practices, but also shows how these techniques are applied into the practical software assignments. The chapters are incorporated with illustrative examples to add an analytical insight on the subject. The book is logically organised to cover expanded and revised treatment of all software process activities. KEY FEATURES • Large number of worked-out examples and practice problems • Chapter-end exercises and solutions to selected problems to check students' comprehension on the subject • Solutions manual available for instructors who are confirmed adopters of the text • PowerPoint slides available online at www.phindia.com/rajibmall to provide integrated learning to the students NEW TO THE FIFTH EDITION • Several rewritten sections in almost every chapter to increase readability • New topics on latest developments, such as agile development using SCRUM, MC/DC testing, quality models, etc. • A large number of additional multiple choice questions and review questions in all the chapters help students to understand the important concepts TARGET AUDIENCE • BE/B.Tech (CS and IT) • BCA/MCA • M.Sc. (CS) • MBA

Software Engineering

For courses in computer science and software engineering The Fundamental Practice of Software Engineering Software Engineering introduces readers to the overwhelmingly important subject of software programming and development. In the past few

years, computer systems have come to dominate not just our technological growth, but the foundations of our world's major industries. This text seeks to lay out the fundamental concepts of this huge and continually growing subject area in a clear and comprehensive manner. The Tenth Edition contains new information that highlights various technological updates of recent years, providing readers with highly relevant and current information. Sommerville's experience in system dependability and systems engineering guides the text through a traditional plan-based approach that incorporates some novel agile methods. The text strives to teach the innovators of tomorrow how to create software that will make our world a better, safer, and more advanced place to live.

Software Engg Concepts

This updated and reorganized fourth edition of Software Testing: A Craftsman's Approach applies the strong mathematics content of previous editions to a coherent treatment of Model-Based Testing for both code-based (structural) and specification-based (functional) testing. These techniques are extended from the usual unit testing discussions to full coverage of less understood levels integration and system testing. The Fourth Edition: Emphasizes technical inspections and is supplemented by an appendix with a full package of documents required for a sample Use Case technical inspection Introduces an innovative approach that merges the Event-Driven Petri Nets from the earlier editions with the "Swim

Lane" concept from the Unified Modeling Language (UML) that permits model-based testing for four levels of interaction among constituents in a System of Systems Introduces model-based development and provides an explanation of how to conduct testing within model-based development environments Presents a new section on methods for testing software in an Agile programming environment Explores test-driven development, reexamines all-pairs testing, and explains the four contexts of software testing Thoroughly revised and updated, Software Testing: A Craftsman's Approach, Fourth Edition is sure to become a standard reference for those who need to stay up to date with evolving technologies in software testing. Carrying on the tradition of previous editions, it will continue to serve as a valuable reference for software testers, developers, and engineers.

An Integrated Approach to Software Engineering

Our new Indian original book on software engineering covers conventional as well as current methodologies of software development to explain core concepts, with a number of case studies and worked-out examples interspersed among the chapters. Current industry practices followed in development, such as computer aided software engineering, have also been included, as are important topics like 'Widget based GUI' and 'Windows Management System'. The book also has coverage on interdisciplinary topics in software engineering that will be useful for software

professionals, such as 'quality management', 'project management', 'metrics' and 'quality standards'. Features Covers both function oriented as well as object oriented (OO) approach Emphasis on emerging areas such as 'Web engineering', 'software maintenance' and 'component based software engineering' A number of line diagrams and examples Case Studies on the ATM system and milk dispenser Includes multiple-choice, objective-type questions and frequently asked questions with answers.

Fundamentals of Solid State Engineering

Beginning with an introduction to cryptography, Hardware Security: Design, Threats, and Safeguards explains the underlying mathematical principles needed to design complex cryptographic algorithms. It then presents efficient cryptographic algorithm implementation methods, along with state-of-the-art research and strategies for the design of very large scale integrated (VLSI) circuits and symmetric cryptosystems, complete with examples of Advanced Encryption Standard (AES) ciphers, asymmetric ciphers, and elliptic curve cryptography (ECC). Gain a Comprehensive Understanding of Hardware Security—from Fundamentals to Practical Applications Since most implementations of standard cryptographic algorithms leak information that can be exploited by adversaries to gather knowledge about secret encryption keys, Hardware Security: Design, Threats, and Safeguards: Details algorithmic- and circuit-level countermeasures for attacks based on power, timing, fault, cache, and scan chain analysis

Describes hardware intellectual property piracy and protection techniques at different levels of abstraction based on watermarking Discusses hardware obfuscation and physically unclonable functions (PUFs), as well as Trojan modeling, taxonomy, detection, and prevention Design for Security and Meet Real-Time Requirements If you consider security as critical a metric for integrated circuits (ICs) as power, area, and performance, you'll embrace the design-for-security methodology of Hardware Security: Design, Threats, and Safeguards.

Software Engineering

This unique volume presents the scientific achievements, significant discoveries and pioneering contributions of various academicians, industrialist and research scholars. The book is an essential source of reference and provides a comprehensive overview of the author's work in the field of mathematics, statistics and computer science. Contents:Databased Intrinsic Weights of Indicators of Multi-Indicator Systems and Performance Measures of Multivariate Rankings of Systemic Objects (G P Patil & S W Joshi)Statistical Aspects of SuDoKu-Based Experimental Designs (Jyotirmoy Sarkar & Bikas K Sinha)Multi Criteria Decision Making Model for Optimal Selection of Recovery Facility Location and Collection Routes for a Sustainable Reverse Logistics Network under Fuzzy Environment (J D Darbari, V Agarwal & P C Jha)Optimal allocation of SKU and Safety Stock in Supply Chain System Network (K Gandhi, K Goyal, A Jha & J D Darbari)Bi-Objective

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Optimization Model for Fault-Tolerant Embedded Systems Under Build-Or-Buy Strategy Incorporating Recovery Block Scheme (R Kaur, S Arora, P C Jha & S Madan)Study of a Problem of Annular Cylinder Under Two-Temperature Thermoelasticity with Thermal Relaxation Parameters (Santwana Mukhopadhyay & Roushan Kumar)Multi-Criteria Advertisement Allocation Model of Multiple Advertisers on a Television Network (G Kaur, S Aggarwal & P C Jha)Computation of Maximum Likelihood Estimates in Three Parameter Weibull for Censored Data (Sanjeeva Kumar Jha)On Statistical Quality Control Techniques Based on Ranked Set Sampling (Md Sarwar Alamand, Arun Kumar Sinha & Rahbar Ali)Approximate Solution for Nonlinear Oscillator with Cubic and Quintic Nonlinearities (Jitendra Singh)Fuzzy DEA Cross-Efficiency Model for Ranking and Performance Evaluation Using Ideal and Anti-Ideal Decision Making Units (Seema Gupta, K N Rajeshwari & P C Jha)Poverty Analysis Using Scan Statistic Methods (Arun Kumar Sinha & Mukesh Kumar)Joint Performance Evaluation Data Envelopment Analysis Problem: An Interactive Approach (Riju Chaudhary, Pankaj Kumar Garg & P C Jha)Stochastic Modeling of a Repairable System Under Different Weather Conditions (S C Malik)Estimation of Risk Surfaces and Identification of District Boundaries for Tuberculosis in North-Eastern Indian States (Sanjeeva Kumar Jha & Ningthoukhongjam Vikimchandra Singh)Optimal Advertisement Allocation for Product Promotion on Television Channels (A Kaul, S Aggarwal, P C Jha & A Gupta)Fitting Linear Regressions: Development and Scope (Pranesh Kumar & J N Singh)The Impact of Family Planning on Fertility in Jharkhand State (Dilip Kumar)Spatial Analysis of

AFP Surveillance Strategy for Polio Eradication in India (Pankaj Srivastava & Arun Kumar Sinha)On the Stochastic Modeling and Analysis of Bloom Caster System of Continuous Casting Shop Area of an Integrated Steel Plant (S K Singh)A Generalized Exponential-Lindley Distribution (A Mishra & Binod Kumar Sah)On Estimating the Urban Populations Using Minimum Information (Arun Kumar Sinha, Vijay Kumar & Ravi B P Verma)Fitting of Some Statistical Distributions of Daily Precipitation Data on North West India (NWI) Regions (Ranjan Kumar Sahoo)On Systematic Sampling Strategies for a Varying Sample Size (K B Panda)Estimation of Measurement Variance Under Two-Stage Sampling: Estimation of Population Mean (Pulakesh Maiti)The Interior-Point Revolution in Mathematical Programming and its Place in Applied Mathematics (J N Singh)Combined Exponential Type Estimators of Population Mean in Stratified Random Sampling (R Pandey, K Yadav & N S Thakur)An Analytical Study on Fractional Fokker-Planck Equation by Homotopy Analysis Transform Method (Jitendra Singh & Rajeev Kumar)L-Primitive Words in Submonoids of a Free Monoid (Shubh Narayan Singh & K V Krishna)Comparison of the Performance of Ranked Set Sampling with the Linear Regression Estimation (Rahbar Ali & Arun Kumar Sinha)Optimal Selection of Logistics Operating Channels for a Sustainable Reverse Supply Chain (Vernika Agarwal, Jyoti Dhingra Darbari & P C Jha)Reliability Measures of a Parallel-Unit System with Arbitrary Distributions of Random Variables (Jitender Kumar, M S Kadyan & S C Malik)Adoption and Evolution of FOSS: Key Factors in the Development of the Apache Web Server (Ranjan Kumar, Subhash Kumar & Sukanta Deb)Android/Tizen

Based Artificial Intelligence Techniques for Prognosis and Diagnosis of Electrical Machines (K V Satya Bharath, Sheikh Suhail Muhammad & Priya Ranjan)Performance Analysis of Quality of Service for Different Service Classes in WiMAX Network (Jokhu Lal & Neeraj Tyagi)A Review of Application of Artificial Neural Network in Ground Water Modeling (Neeta Kumari, Gopal Pathak & Om Prakash)Density Based Outlier Detection (DBOD) in Data Mining: A Novel Approach (Govind Kumar Jha, Neeraj Kumar, Prabhat Ranjan & K G Sharma)Enhanced Velocity BPSO and Convergence Analysis on Dimensionality Reduction (Shikha Agarwal, R Rajesh & Prabhat Ranjan)Modification of the Android Operating System to Predict the Human Body Temperature Using Capacitive Touch (Shubhnkar Upadhyay, Avadhesh Singh, Kumar Abhishek & M P Singh)Context-Aware Based Clustering in Wireless Sensor Networks — A Survey (Santu Paul, M P Singh, J P Singh & Prabhat Kumar)Speech Emotion Recognition Using Vowel Onset and Offset Points (Manish Kumar & Jainath Yadav)A Novel Algorithm for Magic Squares (Govind Kumar Jha, Neeraj Kumar, Prabhat Ranjan & A P Shakya)A Note on Intelligent Street Light System (J Satheesh Kumar & C G Sreekaviya)An Overview of Test Case Optimization Using Meta-Heuristic Approach (Sushant Kumar, Prabhat Ranjan & R Rajesh)Smart City Traffic Management and Surveillance System for Indian Scenario (Tarun Kumar, Rohit Kumar Sachan & Dharmender Singh Kushwaha)Improving Attribute Inference Attack Using Link Prediction in Online Social Networks (Ashish Kumar & N C Rathore)A Dynamic Model on Computer Virus (Upendra Kumar)State of the Art In-Service

Condition Monitoring Techniques of Rotary Machines (Krishna Kant Agrawal, Shekhar Verma & G N Pandey)Image Segmentation: A survey (K M Pooja & R Rajesh)Empirical Reliability Modeling of Transaction Oriented Autonomic Grid Service (Dharmendra Prasad Mahato & Ravi Shankar Singh)Performance Degradation of Language Identification System in Noisy Environment (Randheer Bagi & Jainath Yadav)Analysis of Software Fault Detection and Correction Processes with Log-Logistic Testing-Effort (Md Zafar Imam, Ishrat Jahan Ara & N Ahmad)Skewness Removal of LEACH Protocol for Wireless Sensor Networks (Vishal Gupta & M N Doja)A Novel Approach for Fast Handoff in WLAN (Mithilesh Patel, Bhavna Singh, Sonam Gupta, Anurag Jajoo & Pavan Kumar Mishra)Facial Expression Recognition Using Histogram of Oriented Gradients (Jyoti Kumari & R Rajesh)Cloud Computing: Comparative Study Own Server vs Cloud Server (Surendra Kumar Singh)Mobile and GIS Framework for Plantations and Nursery (E-Plantations) (Shailesh Kumar Shrivastava & S K Mahendran)Internet Traffic Classification: A Survey (Gargi Srivastava, M P Singh, Prabhat Kumar & J P Singh)Comprehensive Study of Search Engine (Sarowar Kumar, Kumar Abhishek, Abhay Kumar & M P Singh)A Survey on Social Networks: Issues and Attacks (Anubha Maurya & M P Singh)Reduced Rule for Banknote Genuinity (Chhotu Kumar & Anil Kumar Dudyala)A Study on Medical Diagnosis Based on Inter Valued Fuzzy Cluster Analysis (Bhagwan Sahay Meena & Sharmila Bhattacharjee) Readership: Undergraduate students, graduate students and researchers in mathematics, computer science and statistics.

Resource Management and Efficiency in Cloud Computing Environments

Chemical Engineering Design is one of the best-known and widely adopted texts available for students of chemical engineering. It deals with the application of chemical engineering principles to the design of chemical processes and equipment. Revised throughout, the fourth edition covers the latest aspects of process design, operations, safety, loss prevention and equipment selection, among others. Comprehensive and detailed, the book is supported by problems and selected solutions. In addition the book is widely used by professionals as a day-to-day reference. Best selling chemical engineering text Revised to keep pace with the latest chemical industry changes; designed to see students through from undergraduate study to professional practice End of chapter exercises and solutions

The Essence of Software Engineering

Innovations for Community Services

This book covers the essential knowledge and skills needed by a student who is specializing in software engineering. Readers will learn principles of object orientation, software development, software modeling, software design, requirements analysis, and testing. The use of the Unified Modelling Language to develop software is taught in depth. Many concepts are illustrated using complete

examples, with code written in Java.

Chemical Engineering Design

Software Project Management in Practice

Software Engineering

Writing Compilers and Interpreters

This introduction to software engineering and practice addresses both procedural and object-oriented development.Is thoroughly updated to reflect significant changes in software engineering, including modeling and agile methods. Emphasizes essential role of modeling design in software engineering. Applies concepts consistently to two common examples a typical information system and a real-time system. Combines theory with real, practical applications by providing an abundance of case studies and examples from the current literature.A useful reference for software engineers.

Software Engineering

SEMAT (Software Engineering Methods and Theory) is an international initiative designed to identify a common ground, or universal standard, for software engineering. It is supported by some of the most

distinguished contributors to the field. Creating a simple language to describe methods and practices, the SEMAT team expresses this common ground as a kernel–or framework–of elements essential to all software development. The Essence of Software Engineering introduces this kernel and shows how to apply it when developing software and improving a team's way of working. It is a book for software professionals, not methodologists. Its usefulness to development team members, who need to evaluate and choose the best practices for their work, goes well beyond the description or application of any single method. "Software is both a craft and a science, both a work of passion and a work of principle. Writing good software requires both wild flights of imagination and creativity, as well as the hard reality of engineering tradeoffs. This book is an attempt at describing that balance." —Robert Martin (unclebob) "The work of Ivar Jacobson and his colleagues, started as part of the SEMAT initiative, has taken a systematic approach to identifying a 'kernel' of software engineering principles and practices that have stood the test of time and recognition." —Bertrand Meyer "The software development industry needs and demands a core kernel and language for defining software development practices—practices that can be mixed and matched, brought on board from other organizations; practices that can be measured; practices that can be integrated; and practices that can be compared and contrasted for speed, quality, and price. This thoughtful book gives a good grounding in ways to think about the problem, and a language to address the need, and every software

engineer should read it." —Richard Soley

Matthews' Plant Virology

It has been ten years since the publication of the third edition of this seminal text on plant virology, during which there has been an explosion of conceptual and factual advances. The fourth edition updates and revises many details of the previous editon, while retaining the important older results that constitute the field's conceptual foundation. Key features of the fourth edition include: * Thumbnail sketches of each genera and family groups * Genome maps of all genera for which they are known * Genetic engineered resistance strategies for virus disease control * Latest understanding of virus interactions with plants, including gene silencing * Interactions between viruses and insect, fungal, and nematode vectors * New plate section containing over 50 full-color illustrations

Software Engineering Fundamentals

The sixth edition of this most trusted book on JAVA for beginners is here with some essential updates. Retaining its quintessential style of concept explanation with exhaustive programs, solved examples, and illustrations, this test takes the journey of understanding JAVA to slightly higher level. The book introduces readers to some of the Core JAVA topics like JDBC, Java Servlets, Java Beans, Lambada Expression and much more. Practical real-life projects will give a better understanding of JAVA usage and

make students industry-ready.

Context-Aware Communication and Computing: Applications for Smart Environment

The goal of this book is to introduce to the students a limited number of concepts and practices which will achieve the following two objectives: Teach the student the skills needed to execute a smallish commercial project. Provide the students necessary conceptual background for undertaking advanced studies in software engineering, through organized courses or on their own. This book focuses on key tasks in two dimensions - engineering and project management - and discusses concepts and techniques that can be applied to effectively execute these tasks. The book is organized in a simple manner, with one chapter for each of the key tasks in a project. For engineering, these tasks are requirements analysis and specification, architecture design, module level design, coding and unit testing, and testing. For project management, the key tasks are project planning and project monitoring and control, but both are discussed together in one chapter on project planning as even monitoring has to be planned. In addition, one chapter clearly defines the problem domain of Software Engineering, and another Chapter discusses the central concept of software process which integrates the different tasks executed in a project. Each chapter opens with some introduction and clearly lists the chapter goals, or what the reader can expect to learn from the chapter.

For the task covered in the chapter, the important concepts are first discussed, followed by a discussion of the output of the task, the desired quality properties of the output, and some practical methods and notations for performing the task. The explanations are supported by examples, and the key learnings are summarized in the end for the reader. The chapter ends with some self-assessment exercises. Finally, the book contains a question bank at the end which lists out questions with answers from major universities.

Software Testing

Proceedings of the 11th Innovations in Software Engineering Conference

Today's advancements in technology have brought about a new era of speed and simplicity for consumers and businesses. Due to these new benefits, the possibilities of universal connectivity, storage and computation are made tangible, thus leading the way to new Internet-of Things solutions. Resource Management and Efficiency in Cloud Computing Environments is an authoritative reference source for the latest scholarly research on the emerging trends of cloud computing and reveals the benefits cloud paths provide to consumers. Featuring coverage across a range of relevant perspectives and topics, such as big data, cloud security, and utility computing, this publication is an essential source for researchers, students and professionals seeking

current research on the organization and productivity of cloud computing environments.

Fundamentals of Software Engineering

A superior primer on software testing and quality assurance, from integration to execution and automation This important new work fills the pressing need for a user-friendly text that aims to provide software engineers, software quality professionals, software developers, and students with the fundamental developments in testing theory and common testing practices. Software Testing and Quality Assurance: Theory and Practice equips readers with a solid understanding of: Practices that support the production of quality software Software testing techniques Life-cycle models for requirements, defects, test cases, and test results Process models for units, integration, system, and acceptance testing How to build test teams, including recruiting and retaining test engineers Quality Models, Capability Maturity Model, Testing Maturity Model, and Test Process Improvement Model Expertly balancing theory with practice, and complemented with an abundance of pedagogical tools, including test questions, examples, teaching suggestions, and chapter summaries, this book is a valuable, self-contained tool for professionals and an ideal introductory text for courses in software testing, quality assurance, and software engineering.

FUNDAMENTALS OF SOFTWARE ENGINEERING, FIFTH EDITION

The biology, biotechnology, chemistry, pharmacy and chemical engineering students at various universtiy and engineering institutions are required to take the Biochemical Engineering course either as an elective or compulsory subject. This book is written keeping in mind the need for a text book on afore subject for students from both engineering and biology backgrounds. The main feature of this book is that it contains the solved problems, which help the students to understand the subject better. The book is divided into three sections: Enzyme mediated bioprocess, whole cell mediated bioprocess and the engineering principle in bioprocess. Dr. Rajiv Dutta is Professor in Biotechnology and Director, Amity Institute of Biotechnology, Lucknow. He earned his M. Tech. in Biotechnology and Engineering from the Department of Chemical Engineering, IIT, Kharagpur and Ph.D. in Bioelectronics from BITS, Pilani. He has taught Biochemical Engineering and Biophysics to B.E., M.E. and M.Sc. level student carried out advanced research in the area of Ion channels at the Department of Botany at Oklahoma State University, Stillwater and Department of Biological Sciences at Purdue University, West Lafayette, IN. He also holds the position of Nanion Technologies Adjunct Research Professor at Research Triangle Institute, RTP, NC. He had received various awards including JCI Outstanding Young Person of India and ISBEM Dr. Ramesh Gulrajani Memorial Award 2006 for outstanding research in electro physiology.

Software Testing and Quality Assurance

This textbook, now in its Second Edition, addresses the rapid advancements to the area of mobile computing. Almost every chapter has been revised to make the book up to date with the latest developments. It covers the main topics associated with mobile computing and wireless networking at a level that enables the students to develop a fundamental understanding of the technical issues involved in this new and fast emerging discipline. This book first examines the basics of wireless technologies and computer communications that form the essential infrastructure required for building knowledge in the area of mobile computations involving the study of invocation mechanisms at the client end, the underlying wireless communication, and the corresponding server-side technologies. It includes coverage of development of mobile cellular systems, protocol design for mobile networks, special issues involved in the mobility management of cellular system users, realization and applications of mobile ad hoc networks (MANETs), design and operation of sensor networks, special constraints and requirements of mobile operating systems, and development of mobile computing applications. Finally, an example application of the mobile computing infrastructure to M-commerce is described in the concluding chapter of the book. The book is suitable for a one-semester course in mobile computing for the undergraduate students of Computer Science and Engineering, Information Technology, Electronics and Communication Engineering, Master of Computer Applications (MCA), and the undergraduate and postgraduate science courses in computer science and Information

Technology. Key Features • Provides unified coverage of mobile computing and communication aspects • Discusses the mobile application development, mobile operating systems and mobile databases as part of the material devoted to mobile computing • Incorporates a survey of mobile operating systems and the latest developments

Engineering Fundamentals: An Introduction to Engineering, SI Edition

It is clear that the development of large software systems is an extremely complex activity, which is full of various opportunities to introduce errors. Software engineering is the discipline that provides methods to handle this complexity and enables us to produce reliable software systems with maximum productivity. An Integrated Approach to Software Engineering is different from other approaches because the various topics are not covered in isolation. A running case study is employed throughout the book, illustrating the different activity of software development on a single project. This work is important and instructive because it not only teaches the principles of software engineering, but also applies them to a software development project such that all aspects of development can be clearly seen on a project.

Software Engineering

Provides coverage of fundamentals of software engineering by stressing principles and methods through formal and informal approaches. This book

emphasizes, identifies, and applies fundamental principles that are applicable throughout the software lifecycle, in contrast to other texts which are based in the lifecycle model of software development.

Software Engineering

Computer Network Simulations Using NS2 provides a solid foundation of computer networking knowledge and skills, covering everything from simple operating system commands to the analysis of complex network performance metrics. The book begins with a discussion of the evolution of data communication techniques and the fundamental issues associated with performance evaluation. After presenting a preliminary overview of simulation and other performance evaluation techniques, the authors: Describe a number of computer network protocols and TCP/IP and OSI models, highlighting the networking devices used Explain a socket and its use in network programming, fostering the development of network applications using C and socket API Introduce the NS2 network simulator, exhibiting its internal architecture, constituent software packages, and installation in different operating systems Delve into simulation using NS2, elaborating on the use of Tcl and OTcl scripts as well as AWK scripting and plotting with Gnuplot Show how to simulate wired and wireless network protocols step by step, layer by layer Explore the idea of simulating very large networks, identifying the challenges associated with measuring and graphing the various network parameters Include nearly 90 example programs, scripts, and outputs,

along with several exercises requiring application of the theory and programming Computer Network Simulations Using NS2 emphasizes the implementation and simulation of real-world computer network protocols, affording readers with valuable opportunities for hands-on practice while instilling a deeper understanding of how computer network protocols work.

Computer Network Simulation Using NS2

Long-awaited revision to a unique guide that covers both compilers and interpreters Revised, updated, and now focusing on Java instead of C++, this long-awaited, latest edition of this popular book teaches programmers and software engineering students how to write compilers and interpreters using Java. You?ll write compilers and interpreters as case studies, generating general assembly code for a Java Virtual Machine that takes advantage of the Java Collections Framework to shorten and simplify the code. In addition, coverage includes Java Collections Framework, UML modeling, object-oriented programming with design patterns, working with XML intermediate code, and more.

FUNDAMENTALS OF MOBILE COMPUTING, Second Edition

Now in dynamic full color, SI ENGINEERING FUNDAMENTALS: AN INTRODUCTION TO ENGINEERING, 5e helps students develop the strong problem-solving skills and solid foundation in

fundamental principles they will need to become analytical, detail-oriented, and creative engineers. The book opens with an overview of what engineers do, an inside glimpse of the various areas of specialization, and a straightforward look at what it takes to succeed. It then covers the basic physical concepts and laws that students will encounter on the job. Professional Profiles throughout the text highlight the work of practicing engineers from around the globe, tying in the fundamental principles and applying them to professional engineering. Using a flexible, modular format, the book demonstrates how engineers apply physical and chemical laws and principles, as well as mathematics, to design, test, and supervise the production of millions of parts, products, and services that people use every day. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

In Search of Being

First Published in 2010. Routledge is an imprint of Taylor & Francis, an informa company.

Software Engineering—Principles and Practices

Object-oriented Software Engineering

Electronics - Circuits and Systems

This book introduces context-aware computing, providing definitions, categories, characteristics, and context awareness itself and discussing its applications with a particular focus on smart learning environments. It also examines the elements of a context-aware system, including acquisition, modelling, reasoning, and distribution of context. It also reviews applications of context-aware computing – both past and present – to offer readers the knowledge needed to critically analyse how context awareness can be put to use. It is particularly to those new to the subject area who are interested in learning how to develop context-aware computing-oriented applications, as well as postgraduates and researchers in computer engineering, communications engineering related areas of information technology (IT). Further it provides practical know-how for professionals working in IT support and technology, consultants and business decision-makers and those working in the medical, human, and social sciences.

Fundamentals of Software Engineering

Are we able to say that life is governed by a group of conscious people? Where are they? Who are they? We see exactly the opposite: that life is governed by those who are the least conscious, by those who are most asleep. Provocative ideas such as these have attracted generations of thoughtful people to the methods of self-study and inner work devised by Gurdjieff, one of the most radical spiritual teachers of modern times. According to Gurdjieff, the wars raging

at this very moment are nothing more than millions of sleeping people trying to annihilate millions of other sleeping people. Contrary to popular belief, there is no such as thing as progress and evolution as long as humanity remains asleep. Two hundred conscious people could change the whole of life on the earth, Gurdjieff says. If we want to become those conscious people, we must learn how to change ourselves. With the help of self-knowledge and an understanding of our relation to the universe, we can awaken to a higher level of being—if we wish to change ourselves. All of Gurdjieff's fundamental principles and methods of transforming the intellect, emotions, and body, in the system known as the Fourth Way, are presented in this book in his own clear, precise words preserved by his closest pupils. Arranged in an orderly sequence of passages drawn from two primary source books—P. D. Ouspensky's In Search of the Miraculous, and Views from the Real World, edited by Mme. Jeanne de Salzmann—this material is an indispensable introduction for those determined to undertake the efforts and practices necessary for awakening consciousness. All the basic concepts and methods are covered, including: • man is "asleep" • we have no unified "I" • the need for self-knowledge • functions of the human "machine" • states of consciousness • levels of being • three centers: moving, emotional, and thinking • personality and essence • the possibility of self-development • self-observation • remembering oneself • conscious evolution • the law of three forces • the ray of creation • the law of octaves • the Enneagram, a universal symbol • the variety of spiritual ways • esoteric Christianity • working in groups • the

necessity of schools

Programming with Java

While encouraging the use of modeling techniques for sizing, cost and schedule estimation, reliability, risk assessment, and real-time design, the authors emphasize the need to calibrate models with actual data. Explicit guidance is provided for virtually every task that a software engineer may be assigned, and realistic case studies and examples are used extensively to reinforce the topics presented.

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