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Unlocking the Clubhouse - Jane Margolis 2003-02-28
Understanding and overcoming the gender gap in computer science education. The information technology revolution is transforming almost every aspect of society, but girls and women are largely out of the loop. Although women surf the Web in equal numbers to men and make a majority of online purchases, few are involved in the design and creation of new technology. It is mostly men whose perspectives and priorities inform the development of computing innovations and who reap the lion's share of the financial rewards. As only a small fraction of high school and college computer science students are female, the field is likely to remain a "male clubhouse," absent major changes. In Unlocking the Clubhouse, social scientist Jane Margolis and computer scientist and educator Allan Fisher examine the many influences contributing to the gender gap in computing. The book is based on interviews with more than 100 computer science students of both sexes from Carnegie Mellon University, a major center of computer science research, over a period of four years, as well as classroom observations and conversations with hundreds of college and high school faculty. The interviews capture the dynamic details of the female computing experience, from the family computer kept in a brother's bedroom to women's feelings of alienation in college computing classes. The authors investigate the familial, educational, and institutional origins of the computing gender gap. They also describe educational reforms that have made a dramatic difference at Carnegie Mellon—where the percentage of women entering the School of Computer Science rose from 7% in 1995 to 42% in 2000—and at high schools around the country.

Agile Software Development - Torgeir Dingsøyr 2010-05-26
Agile software development has become an umbrella term for a number of changes in how software developers plan and coordinate their work, how they communicate with customers and external stakeholders, and how software development is organized in small, medium, and large companies, from the telecom and healthcare sectors to games and interactive media. Still, after a decade of research, agile software development is the source of continued debate due to its multifaceted nature and insufficient synthesis of research results. Dingsøyr, Dybå, and Moe now present a comprehensive snapshot of the knowledge gained over many years of research by those working closely with or in the industry. It shows the current state of research on agile software development through an introduction and ten invited contributions on the main research fields, each written by renowned experts. These chapters cover three main issues: foundations and background of agile development, agile methods in practice, and principal challenges and new frontiers. They show the important results in each subfield, and in addition they explain what these results mean to practitioners as well as for future research in the field. The book is aimed at reflective practitioners and researchers alike, and it also can serve as the basis for graduate courses at universities.

New Perspectives in Software Engineering - Jezreel Mejia 2020-11-06
This book contains a selection of papers from the 2020 International Conference on Software Process Improvement (CIMPS 20), held between the 21st and 23rd of October in Mazatlán, Sinaloa, México. The CIMPS 20 is a global forum for researchers and practitioners that present and discuss the most recent innovations, trends, results, experiences and concerns in the several perspectives of Software Engineering with clear relationship but not limited to software processes, Security in Information and Communication Technology and Big Data Field. The main topics covered are: Organizational Models, Standards and Methodologies, Software Process Improvement, Knowledge Management, Software Systems, Applications and Tools, Information and Communication Technologies and Processes in Non-software Domains (mining, automotive, aerospace, business, health care, manufacturing, etc.) with a demonstrated relationship to Software Engineering Challenges.

Agile Processes in Software Engineering and Extreme Programming - Viktoria Stray 2020-01-01
This open access book constitutes the proceedings of the 21st International Conference on Agile Software Development, XP 2020, which was planned to be held during June 8-12, 2020, at the IT University of Copenhagen, Denmark. However, due to the COVID-19 pandemic the conference was postponed until an undetermined date. XP is the premier agile software development conference combining research and practice. It is a hybrid forum where agile researchers, academics, practitioners, thought leaders, coaches, and trainers get together to present and discuss their most recent innovations, research results, experiences, concerns, challenges, and trends. Following this history, for both researchers and seasoned practitioners XP 2020 provided an informal environment to network, share, and discover trends in Agile for the next 20 years. The 14 full and 2 short papers presented in this volume were carefully reviewed and selected from 37 submissions. They were organized in topical sections named: agile adoption; agile practices; large-scale agile; the business of agile; and agile and testing.

PANKAJ JALOTE'S SOFTWARE ENGINEERING: A PRECISE APPROACH - Pankaj Jalote 2010
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.

Applying Use Cases - Geri Schneider 2001-03-31

Use case analysis is a methodology for defining the outward features of a software system from the user's point of view. Applying Use Cases, Second Edition, offers a clear and practical introduction to this cutting-edge software development technique. Using numerous realistic examples and a detailed case study, you are guided through the application of use case analysis in the development of software systems. This new edition has been updated and expanded to reflect the Unified Modeling Language (UML) version 1.3. It also includes more complex and precise examples, descriptions of the pros and cons of various use case documentation techniques, and discussions on how other modeling approaches relate to use cases. Applying Use Cases, Second Edition, walks you through the software development process, demonstrating how use cases apply to project inception, requirements and risk analysis, system architecture, scheduling, review and testing, and documentation. Key topics include: Identifying use cases and describing actors Writing the flow of events, including basic and alternative paths Reviewing use cases for completeness and correctness Diagramming use cases with activity diagrams and sequence diagrams Incorporating user interface description and data description documents Testing architectural patterns and designs with use cases Applying use cases to project planning, prototyping, and estimating Identifying and diagramming analysis classes from use cases Applying use cases to user guides, test cases, and training material An entire section of the book is devoted to identifying common mistakes and describing their solutions. Also featured is a handy collection of documentation templates and an abbreviated guide to UML notation. You will come away from this book with a solid understanding of use cases, along with the skills you need to put use case analysis to work.

Human-Centered Software Engineering - Ahmed Seffah 2009-06-19

Activity theory is a way of describing and characterizing the structure of human - tivity of all kinds. First introduced by Russian psychologists Rubinshtein, Leontiev, and Vigotsky in the early part of the last century, activity theory has more recently gained increasing attention among interaction designers and others in the hum- computer interaction and usability communities (see, for example, Gay and H- brooke, 2004). Interest was given a signi?cant boost when Donald Norman suggested activity-theory and activity-centered design as antidotes to some of the putative ills of “human-centered design” (Norman, 2005). Norman, who has been credited with coining the phrase “user-centered design,” suggested that too much attention focused on human users may be harmful, that to design better tools designers need to focus not so much on users as on the activities in which users are engaged and the tasks they seek to perform within those activities. Although many researchers and practitioners claim to have used or been in?uenced by activity theory in their work (see, for example, Nardi, 1996), it is often dif?cult to trace precisely where or how the results have actually been shaped by activity theory. Inmanycases, evendetailedcasestudiesreportresultsthatseemonlydistantlyrelated, if at all, to the use of activity theory. Contributing to the lack of precise and traceable impact is that activity theory, - spite its name, is not truly a formal and proper theory.

Trends and Applications in Software Engineering - Jezreel Mejia 2017-10-19

This book includes a selection of papers from the 2017 International Conference on Software Process Improvement (CIMPS’17), presenting trends and applications in software engineering. Held from 18th to 20th October 2017 in Zacatecas, Mexico, the conference provided a global forum for researchers and practitioners to present and discuss the latest innovations, trends, results, experiences and concerns in various areas of software engineering, including but not limited to software processes, security in information and communication technology, and big data. The main topics covered are organizational models, standards and methodologies, software process improvement, knowledge management, software systems, applications and tools, information and communication technologies and processes in non-software domains (mining, automotive, aerospace, business, health care, manufacturing, etc.) with a demonstrated relationship to software engineering challenges.

Topological UML Modeling - Janis Osis 2017-06-16

Topological UML Modeling: An Improved Approach for Domain Modeling and Software Development presents a specification for Topological UML® that combines the formalism of the Topological Functioning Model (TFM) mathematical topology with a specified software analysis and design method. The analysis of problem domain and design of desired solutions within software development processes has a major impact on the achieved result – developed software. While there are many tools and different techniques to create detailed specifications of the solution, the proper analysis of problem domain functioning is ignored or covered insufficiently. The design of object-oriented software has been led for many years by the Unified Modeling Language (UML®), an approved industry standard modeling notation for visualizing, specifying, constructing, and documenting the artifacts of a software-intensive system, and this comprehensive book shines new light on the many advances in the field. Presents an approach to formally define, analyze, and verify functionality of existing processes and desired processes to track incomplete or incorrect functional requirements Describes the path from functional and nonfunctional requirements specification to software design with step-by-step creation and transformation of diagrams and models with very early capturing of security requirements for software systems. Defines all modeling constructs as extensions to UML®, thus creating a new UML® profile which can be implemented in existing UML® modeling tools and toolsets

The Art of Software Architecture - Stephen T. Albin 2003-03-20

This innovative book uncovers all the steps readers should follow in order to build successful software and systems With the help of numerous examples, Albin clearly shows how to incorporate Java, XML, SOAP, ebXML, and BizTalk when designing true distributed business systems Teaches how to easily integrate design patterns into software design Documents all architectures in UML and presents code

in either Java or C++

Use Cases - Daryl Kulak 2012-03-30

This book describes how to gather and define software requirements using a process based on use cases. It shows systems analysts and designers how use cases can provide solutions to the most challenging requirements issues, resulting in effective, quality systems that meet the needs of users. Use Cases, Second Edition: Requirements in Context describes a three-step method for establishing requirements—an iterative process that produces increasingly refined requirements. Drawing on their extensive, real-world experience, the authors offer a wealth of advice on use-case driven lifecycles, planning for change, and keeping on track. In addition, they include numerous detailed examples to illustrate practical applications. This second edition incorporates the many advancements in use case methodology that have occurred over the past few years. Specifically, this new edition features major changes to the methodology's iterations, and the section on management reflects the faster-paced, more "chaordic" software lifecycles prominent today. In addition, the authors have included a new chapter on use case traceability issues and have revised the appendixes to show more clearly how use cases evolve. The book opens with a brief introduction to use cases and the Unified Modeling Language (UML). It explains how use cases reduce the incidence of duplicate and inconsistent requirements, and how they facilitate the documentation process and communication among stakeholders. The book shows you how to: Describe the context of relationships and interactions between actors and applications using use case diagrams and scenarios Specify functional and nonfunctional requirements Create the candidate use case list Break out detailed use cases and add detail to use case diagrams Add triggers, preconditions, basic course of events, and exceptions to use cases Manage the iterative/incremental use case driven project lifecycle Trace back to use cases, nonfunctionals, and business rules Avoid classic mistakes and pitfalls The book also highlights numerous currently available tools, including use case name filters, the context matrix, user interface requirements, and the authors' own "hierarchy killer."

A Discipline for Software Engineering - Watts S. Humphrey 1995-09

Springer Handbook of Automation - Shimon Y. Nof 2009-07-16

This handbook incorporates new developments in automation. It also presents a widespread and well-structured conglomeration of new emerging application areas, such as medical systems and health, transportation, security and maintenance, service, construction and retail as well as production or logistics. The handbook is not only an ideal resource for automation experts but also for people new to this expanding field.

Software Process Improvement - Rory O'Connor 2009-08-21

This textbook is intended for SPI (software process improvement) managers and -searchers, quality managers, and experienced project and research managers. The papers constitute the research proceedings of the 16th EuroSPI (European Software Process Improvement, www.eurospi.net) conference held in Alcala (Madrid region), September 2–4, 2009, Spain. Conferences have been held since 1994 in Dublin, 1995 in Vienna (Austria), 1997 in Budapest (Hungary), 1998 in Gothenburg (Sweden), 1999 in Pori (Finland), 2000 in Copenhagen (Denmark), 2001 in Limerick (Ireland), 2002 in Nuremberg (G- many), 2003 in Graz (Austria), 2004 in Trondheim (Norway), 2005 in Budapest (Hungary), 2006 in Joensuu (Finland), 2007 in Potsdam (Germany), 2008 in Dublin (Ireland), and 2009 in Alcala (Spain). EuroSPI established an experience library (library.eurospi.net) which will be conti- ously extended over the next few years and will be made available to all attendees. EuroSPI also created an umbrella initiative for establishing a European Qualification Network in which different SPINs and national initiatives join mutually beneficial collaborations (ECQA – European Certification and Qualification Association, www.ecqa.org). With a general assembly during October 15–16, 2007 through Euro-SPI partners and networks, in collaboration with the European Union (supported by the EU L- nardo da Vinci Programme) a European certification association has been created (www.eu-certificates.org, www.ecqa.org) for the IT and services sector to offer SPI knowledge and certificates to industry, establishing close knowledge transfer links between research and industry.

Managing Technical Debt - Philippe Kruchten 2019-04-15

“This is an incredibly wise and useful book. The authors have considerable real-world experience in delivering quality systems that matter, and their expertise shines through in these pages. Here you will learn what technical debt is, what is it not, how to manage it, and how to pay it down in responsible ways. This is a book I wish I had when I was just beginning my career. The authors present a myriad of case studies, born from years of experience, and offer a multitude of actionable insights for how to apply it to your project.” —Grady Booch, IBM Fellow Master Best Practices for Managing Technical Debt to Promote Software Quality and Productivity As software systems mature, earlier design or code decisions made in the context of budget or schedule constraints increasingly impede evolution and innovation. This phenomenon is called technical debt, and practical solutions exist. In Managing Technical Debt, three leading experts introduce integrated, empirically developed principles and practices that any software professional can use to gain control of technical debt in any software system. Using real-life examples, the authors explain the forms of technical debt that afflict software-intensive systems, their root causes, and their impacts. They introduce proven approaches for identifying and assessing specific sources of technical debt, limiting new debt, and “paying off” debt over time. They describe how to establish managing technical debt as a core software engineering practice in your organization. Discover how technical debt damages manageability, quality, productivity, and morale—and what you can do about it Clarify root causes of debt, including the linked roles of business goals, source code, architecture, testing, and infrastructure Identify technical debt items, and analyze their costs so you can prioritize action Choose the right solution for each technical debt item: eliminate, reduce, or mitigate Integrate software engineering practices that minimize new debt Managing Technical Debt will be a valuable resource for every software professional who wants to accelerate innovation in existing systems, or build new systems that will be easier to maintain and evolve.

Pattern Languages of Program Design - James O. Coplien 1995

Informatics and the Digital Society - Tom J. van Weert 2013-06-05

SECIII-Social, Ethical and Cognitive Issues of Informatics and ICT Welcome to the post-conference book of SECIII, the IFIP Open Conference on Social, Ethical and Cognitive Issues of Informatics and ICT (Information and Communication Technology) which took place from July 22-26, 2002 at the University of Dortmund, Germany, in co-operation with the German computer society (Gesellschaft flir Informatik). Unlike most international conferences, those organised within the IFIP education community are active events. This wasn't a dry academic conference - teachers, lecturers and curriculum experts, policy makers, researchers and manufacturers mingled and worked together to explore, reflect and discuss social, ethical and

cognitive issues. The added value lies in what they, the participants, took away in new ideas for future research and practice, and in the new networks that were formed, both virtual and real. In addition to Keynote Addresses and Paper Presentations from international authors, there were Provocative Paper sessions, Case Studies, Focussed Debates and Creative Exchange sessions as well as professional Working Groups who debated particular themes. The Focussed Debate sessions helped to stimulate the sense of engagement among conference participants. A Market Place with follow-up Working Groups was a positive highlight and galvanised participants to produce interesting reports. These were presented to the conference on its last day. Cross-fertilisation between the papers generated some surprising and useful cross-referencing and a plethora of social, ethical and cognitive issues emerged in the discussions that followed the paper presentations.

The Road Map to Software Engineering - James W. Moore 2006-01-03

The Road Map to Software Engineering: A Standards-Based Guide organizes relevant IEEE software and systems standards using two frameworks: the SWEBOK Guide's topical knowledge areas and the widely used IEEE/EIA 12207 standard. This useful guide is endorsed and recommended by the Software and Systems Engineering Standards Committee of the IEEE Computer Society for both practitioners and students.

The Rational Unified Process - Philippe Kruchten 2004

bull; Reflects all of the changes that were integrated into RUP v2003-the latest version of the very popular produc t bull; Learn the key concepts, fundamentals of structure, integral content, and motivation behind the RUP bull; Covers all phases of the software development lifecycle -from concept, to delivery, to revision

IEEE Std. 1012-1998 - 1998

Guide to the Software Engineering Body of Knowledge - Alain Abran 2004

The purpose of the Guide to the Software Engineering Body of Knowledge is to provide a validated classification of the bounds of the software engineering discipline and topical access that will support this discipline. The Body of Knowledge is subdivided into ten software engineering Knowledge Areas (KA) that differentiate among the various important concepts, allowing readers to find their way quickly to subjects of interest. Upon finding a subject, readers are referred to key papers or book chapters. Emphases on engineering practice lead the Guide toward a strong relationship with the normative literature. The normative literature is validated by consensus formed among practitioners and is concentrated in standards and related documents. The two major standards bodies for software engineering (IEEE Computer Society Software and Systems Engineering Standards Committee and ISO/IEC JTC1/SC7) are represented in the project.

The Rational Unified Process Made Easy - Per Kroll 2003

The authors explain the underlying software development principles behind theRUP, and guide readers in its application in their organization.

Innovation and Inclusion in Latin America - Alejandro Foxley 2016-06-06

This book argues that Latin America must confront two main challenges: greater innovation to increase productivity, and greater inclusion to incorporate more of the population into the benefits of economic growth. These two tasks are interrelated, and both require greater institutional capacity to facilitate both innovation and inclusion. Most countries in Latin America are struggling to escape what economists label “the middle income trap.” While much if not all of the region has emerged from low income status, neither growth nor productivity has increased sufficiently to enable Latin America to narrow the gap separating it from the world’s most developed economies. Although income inequality has diminished across much of the region in recent years, social vulnerability remains widespread and institutional weaknesses continue to plague efforts to achieve equitable development. This volume identifies lessons that can be learned and adapted from experiences within the region and in East Asia, where the middle income trap has largely been avoided. This book is the result of a collaborative project undertaken by American University’s Center for Latin American & Latino Studies (CLALS) and the Corporation for Latin American Studies (CIEPLAN) in Chile, with financial support from the Inter-American Development Bank’s Office of Strategic Planning and Development Effectiveness.

Scaling Software Agility - Dean Leffingwell 2007-02-26

“Companies have been implementing large agile projects for a number of years, but the ‘stigma’ of ‘agile only works for small projects’ continues to be a frequent barrier for newcomers and a rallying cry for agile critics. What has been missing from the agile literature is a solid, practical book on the specifics of developing large projects in an agile way. Dean Leffingwell’s book Scaling Software Agility fills this gap admirably. It offers a practical guide to large project issues such as architecture, requirements development, multi-level release planning, and team organization. Leffingwell’s book is a necessary guide for large projects and large organizations making the transition to agile development.” —Jim Highsmith, director, Agile Practice, Cutter Consortium, author of Agile Project Management “There’s tension between building software fast and delivering software that lasts, between being ultra-responsive to changes in the market and maintaining a degree of stability. In his latest work, Scaling Software Agility, Dean Leffingwell shows how to achieve a pragmatic balance among these forces. Leffingwell’s observations of the problem, his advice on the solution, and his description of the resulting best practices come from experience: he’s been there, done that, and has seen what’s worked.” —Grady Booch, IBM Fellow Agile development practices, while still controversial in some circles, offer undeniable benefits: faster time to market, better responsiveness to changing customer requirements, and higher quality. However, agile practices have been defined and recommended primarily to small teams. In Scaling Software Agility, Dean Leffingwell describes how agile methods can be applied to enterprise-class development. Part I provides an overview of the most common and effective agile methods. Part II describes seven best practices of agility that natively scale to the enterprise level. Part III describes an additional set of seven organizational capabilities that companies can master to achieve the full benefits of software agility on an enterprise scale. This book is invaluable to software developers, testers and QA personnel, managers and team leads, as well as to executives of software organizations whose objective is to increase the quality and productivity of the software development process but who are faced with all the challenges of developing software on an enterprise scale.

14th Conference on Software Engineering Education and Training - Pierre Bourque 2001

Business Object Design and Implementation - Jeffrey V. Sutherland 2012-12-06

Over the past 10 years, object technology has gained widespread acceptance within the software industry. Within a wider context, however, it has made little impact on the core applications which support businesses in carrying out their tasks. This volume contains a collection of papers establishing the need for Business

Objects, with particular reference to work undertaken by the Object Management Group (OMG). The emphasis is on defining an agenda for establishing Business Object standards and architectures, for developing software technology to support Business Objects applications and managing object oriented development projects. The wide variety of papers presented, and their authors' expertise, make this book a significant contribution to the development of Business Objects and their management.

Software Engineering - Gregory W. Jones 1990-04-03

This one-semester undergraduate course introduces software engineering. A detailed guide to processes and products, this new text provides all the essential information needed to develop software engineering skills. The book offers in-depth coverage of all fundamental topics and includes follow-up projects in an appendix for hands-on application. Each chapter is followed by a variety of open-ended problems that afford maximum flexibility in course use and encourage students to exhibit originality and judgment. An instructor's manual contains solutions to some of the problems, as well as suggested examinations and course schedules. There is also an extensive and easily accessible bibliography that provides opportunities for further study.

Facts and Fallacies of Software Engineering - Robert L. Glass 2003

Regarding the controversial and thought-provoking assessments in this handbook, many software professionals might disagree with the authors, but all will embrace the debate. Glass identifies many of the key problems hampering success in this field. Each fact is supported by insightful discussion and detailed references.

Software Engineering: Effective Teaching and Learning Approaches and Practices - Ellis, Heidi J.C. 2008-10-31

Over the past decade, software engineering has developed into a highly respected field. Though computing and software engineering education continues to emerge as a prominent interest area of study, few books specifically focus on software engineering education itself. Software Engineering: Effective Teaching and Learning Approaches and Practices presents the latest developments in software engineering education, drawing contributions from over 20 software engineering educators from around the globe. Encompassing areas such as student assessment and learning, innovative teaching methods, and educational technology, this much-needed book greatly enhances libraries with its unique research content.

Making Sense of Agile Project Management - Charles G. Cobb 2011-02-08

Making Sense of Agile Project Management Business & Economics/Project Management The essential primer to successfully implementing agile project management into an overall business strategy For a project to be truly successful, its management strategy must be flexible enough to adapt to dynamic and rapidly evolving business needs. Making Sense of Agile Project Management helps project managers think outside the box by presenting a deep exploration of agile principles, methodologies, and practices. Straying from traditional bureaucratic procedures that are rigidly defined, this book espouses a heavy reliance on the training and skill of collaborative, cross-functional teams to adapt the methodology to the problem that they are attempting to solve—rather than force-fitting a project to a particular methodology. Making Sense of Agile Project Management: Focuses on how agile project management fits with other more traditional project management models to provide a more effective strategy Includes many cases taken from real-world companies illustrating good and bad agile implementation Provides coverage that is balanced and objective with discussion of both agile and non-agile methodologies Making Sense of Agile Project Management employs a straightforward approach that enables project managers to grasp concepts quickly and develop adaptable management tools for creating a vibrant and fluid business environment. By utilizing the principles laid out in this book, business managers and leaders will strengthen their ability to meet the risks and complexities of any individual project—and better understand how to blend the appropriate balance of control and agility into an overall business strategy.

The Rational Unified Process - Philippe Kruchten 2000

The second edition of this text brings the content up to date and in compliance with Rational unified Process 2000. It defines the process, putting it into a proper software development context, reviewing the RUPS history and providing detailed coverage of its structure.

Research Anthology on Recent Trends, Tools, and Implications of Computer Programming - Management Association, Information Resources 2020-08-03

Programming has become a significant part of connecting theoretical development and scientific application computation. Computer programs and processes that take into account the goals and needs of the user meet with the greatest success, so it behooves software engineers to consider the human element inherent in every line of code they write. Research Anthology on Recent Trends, Tools, and Implications of Computer Programming is a vital reference source that examines the latest scholarly material on trends, techniques, and uses of various programming applications and examines the benefits and challenges of these computational developments. Highlighting a range of topics such as coding standards, software engineering, and computer systems development, this multi-volume book is ideally designed for programmers, computer scientists, software developers, analysts, security experts, IoT software programmers, computer and software engineers, students, professionals, and researchers.

The Art of Agile Practice - Bhuvan Unhelkar 2016-04-19

The Art of Agile Practice: A Composite Approach for Projects and Organizations presents a consistent, integrated, and strategic approach to achieving "Agility" in your business. Transcending beyond Agile as a software development method, it covers the gamut of methods in an organization-including business processes, governance standards, project ma

MDA Distilled - Stephen J. Mellor 2004

MDA Distilled is an accessible introduction to the MDA standard and its tools and technologies. The book describes the fundamental features of MDA, how they fit together, and how you can use them in your organization today. You will also learn how to define a model-driven process for a project involving multiple platforms, implement that process, and then test the resulting system.

Software Engineering Process with the UPEDU - Pierre N. Robillard 2003

This book provides a general introduction to the essentials of the software development process, that series of activities that facilitate developing better software in less time. It starts with the basic aspects of software process which are the methods, tools and the concepts of the software life cycle. The second and third parts emphasize the engineering and management disciplines that are the core of any software engineering process. The fourth part, which is concerned with the quality aspects of software process, presents the aspects of process assessment and measurement. The last chapter introduces a software process metamodel, which is the theoretical foundation for any software process. The approach is general, and the explanations are not tied to a particular commercial process. The book includes an ongoing case study example which does use the Unified Process for Education, which is derived from The Rational Unified Process. This book thus

enables readers to gain experience with some of the basics of the Rational Unified Process the industry's most powerful tool for incorporating the best practices into software development and prepares them to work with any organization's software process. The book includes a robust Website with all the sample deliverables and artifacts created from the case study, as well as chapter-by-chapter sections with further, up-to-date readings on process advancements, the PDF files for all the figures in the book, links to Software Engineering news sites, chapter by chapter information on commercial tools, industry standards, etc.

Conference on Software Engineering Education and Training - Timothy Christian Lethbridge 2002

This volume originated from the 15th Conference on Software Engineering Education and Training and examines software design and development. It is aimed at researchers, professors, practitioners and students.

Software Project Management - Walker Royce 1998

Software Project Management explains the latest management strategies and techniques in software developments. It covers such issues as keeping the team motivated, cost-justifying strategies, deaflines and budgets.

Testing Extreme Programming - Lisa Crispin 2003

Testing is a cornerstone of XP, as tests are written for every piece of code before it is programmed. This workbook helps testers learn XP, and XP devotees learn testing. This new book defines how an XP tester can optimally contribute to a project, including what testers should do, when they should do it, and how they should do it.

Applied Software Architecture - Christine Hofmeister 2000

"Designing a large software system is an extremely complicated undertaking that requires juggling differing perspectives and differing goals, and evaluating differing options. Applied Software Architecture is the best book yet that gives guidance as to how to sort out and organize the conflicting pressures and produce a successful design." -- Len Bass, author of Software Architecture in Practice. Quality software architecture design has always been important, but in today's fast-paced, rapidly changing, and complex development environment, it is essential. A solid, well-thought-out design helps to manage complexity, to resolve trade-offs among conflicting requirements, and, in general, to bring quality software to market in a more timely fashion. Applied Software Architecture provides practical guidelines and techniques for producing quality software designs. It gives an overview of software architecture basics and a detailed guide to architecture design tasks, focusing on four fundamental views of architecture--conceptual, module, execution, and code. Through four real-life case studies, this book reveals the insights and best practices of the most skilled software architects in designing software architecture. These case studies, written with the masters who created them, demonstrate how the book's concepts and techniques are embodied in state-of-the-art architecture design. You will learn how to: create designs flexible enough to incorporate tomorrow's technology; use architecture as the basis for meeting performance, modifiability, reliability, and safety requirements; determine priorities among conflicting requirements and arrive at a successful solution; and use software architecture to help integrate system components. Anyone involved in software architecture will find this book a valuable compendium of best practices and an insightful look at the critical role of architecture in software development. 0201325713B07092001

Balancing Agility and Discipline - Barry W. Boehm 2004

"Balancing Agility and Discipline" begins by defining the terms, sweeping aside the rhetoric and drilling down to core concepts. The authors describe a day in the life of developers who live on one side or the other. Their analysis is both objective and grounded, leading to clear and practical guidance for all software professionals.