

Iso 25010 2011

This book offers readers essential orientation on cybersecurity safeguards, and first and foremost helps them find the right balance between financial expenditures and risk mitigation. This is achieved by pursuing a multi-disciplinary approach that combines well-founded methods from economics and the computer sciences. Established decision making techniques are embedded into a walk-through for the complete lifecycle of cybersecurity investments. Insights into the economic aspect of the costs and benefits of cybersecurity are supplemented by established and innovative economic indicators. Readers will find practical tools and techniques to support reasonable decision making in cybersecurity investments. Further, they will be equipped to encourage a common understanding using economic aspects, and to provide cost transparency for the senior management.

Why does poor software quality continue to plague enterprises of all sizes in all industries? Part of the problem lies with the process, rather than individual developers. This practical guide provides ten best practices to help team leaders create an effective working environment through key adjustments to their process. As a follow-up to their popular book, *Building Maintainable Software*, consultants with the Software Improvement Group (SIG) offer critical

lessons based on their assessment of development processes used by hundreds of software teams. Each practice includes examples of goalsetting to help you choose the right metrics for your team. Achieve development goals by determining meaningful metrics with the Goal-Question-Metric approach Translate those goals to a verifiable Definition of Done Manage code versions for consistent and predictable modification Control separate environments for each stage in the development pipeline Automate tests as much as possible and steer their guidelines and expectations Let the Continuous Integration server do much of the hard work for you Automate the process of pushing code through the pipeline Define development process standards to improve consistency and simplicity Manage dependencies on third party code to keep your software consistent and up to date Document only the most necessary and current knowledge

In this book, the authors highlight recent findings that hold the potential to improve software products or development processes; in addition, they help readers understand new concepts and technologies, and to see what it takes to migrate from old to new platforms. Some of the authors have spent most of their careers in industry, working at the frontiers of practice-based innovation, and are at the same time prominent researchers who have made significant

academic contributions. Others work together with industry to test, in industrial settings, the methods they've developed in the lab. The choice of subject and authors represent the key elements of this book. Its respective chapters cover a wide range of topics, from cloud computing to agile development, applications of data science methods, re-engineering of aging applications into modern ones, and business and requirements engineering. Taken together, they offer a valuable asset for practitioners and researchers alike.

Software and systems quality is playing an increasingly important role in the growth of almost all ? profit and non-profit ? organisations. Quality is vital to the success of enterprises in their markets. Most small trade and repair businesses use software systems in their administration and marketing processes. Every doctor's surgery is managing its patients using software. Banking is no longer conceivable without software. Aircraft, trucks and cars use more and more software to handle their increasingly complex technical systems. Innovation, competition and cost pressure are always present in on-going business decisions. The question facing all these organisations is how to achieve the right quality of their software-based systems and products; how to get the required level of quality, a level that the market will reward, a level that mitigates the organisation's risks and a level that the

organisation is willing to pay for. Although a number of good practices are in place, there is still room for huge improvements. Thus, let us take a look into the two worlds of “Embedded systems” and “ICT systems” and let us learn from both worlds, from overlaps and individual solutions. The next step for industrialisation in the software industry is required now. Hence, three pillars will be focused in this book: (1) a fundamental notion of right software and systems quality (RiSSQ); (2) portfolio management, quality governance, quality management, and quality engineering as holistic approach over the three layers of an enterprise, i.e. strategic, tactical, and operational layer; and (3) an industrialisation framework for implementing our approach.

The highly dynamic world of information technology service management stresses the benefits of the quick and correct implementation of IT services. A disciplined approach relies on a separate set of assumptions and principles as an agile approach, both of which have complicated implementation processes as well as copious benefits. Combining these two approaches to enhance the effectiveness of each, while difficult, can yield exceptional dividends. *Balancing Agile and Disciplined Engineering and Management Approaches for IT Services and Software Products* is an essential publication that focuses on clarifying theoretical foundations of balanced design methods with

conceptual frameworks and empirical cases. Highlighting a broad range of topics including business trends, IT service, and software development, this book is ideally designed for software engineers, software developers, programmers, information technology professionals, researchers, academicians, and students.

This book constitutes the refereed proceedings of the 14th International Conference on Evaluation of Novel Approaches to Software Engineering, ENASE 2019, held in Heraklion, Crete, Greece, in May 2019. The 19 revised full papers presented were carefully reviewed and selected from 102 submissions. The papers included in this book contribute to the understanding of relevant trends of current research on novel approaches to software engineering for the development and maintenance of systems and applications, specifically with relation to: model-driven software engineering, requirements engineering, empirical software engineering, service-oriented software engineering, business process management and engineering, knowledge management and engineering, reverse software engineering, software process improvement, software change and configuration management, software metrics, software patterns and refactoring, application integration, software architecture, cloud computing, and formal methods.

With recent releases of affordable hardware devices

the fields of Virtual, Mixed, and Augmented Reality gained considerable attention, wherefore the creation of corresponding software becomes increasingly important. In the absence of a common model for flexibly combining and reusing appropriate software modules, such Realtime Interactive Systems are commonly implemented from scratch. Borrowing from the fields of Software Engineering and Knowledge Representation, this work develops a model for the creation of reusable components from existing software modules. With a Knowledge Representation Layer at its core the model additionally enables the utilization of methods from the field of Artificial Intelligence, thereby supporting the creation of Intelligent Realtime Interactive Systems.

Have you ever felt frustrated working with someone else's code? Difficult-to-maintain source code is a big problem in software development today, leading to costly delays and defects. Be part of the solution. With this practical book, you'll learn 10 easy-to-follow guidelines for delivering Java software that's easy to maintain and adapt. These guidelines have been derived from analyzing hundreds of real-world systems. Written by consultants from the Software Improvement Group (SIG), this book provides clear and concise explanations, with advice for turning the guidelines into practice. Examples for this edition are written in Java, while our companion C# book

provides workable examples in that language. Write short units of code: limit the length of methods and constructors Write simple units of code: limit the number of branch points per method Write code once, rather than risk copying buggy code Keep unit interfaces small by extracting parameters into objects Separate concerns to avoid building large classes Couple architecture components loosely Balance the number and size of top-level components in your code Keep your codebase as small as possible Automate tests for your codebase Write clean code, avoiding "code smells" that indicate deeper problems

The era of the fourth industrial revolution has fundamentally transformed the manufacturing landscape. Products are getting increasingly complex and customers expect a higher level of customization and quality. Manufacturing in the Era of 4th Industrial Revolution explores three technologies that are the building blocks of the next-generation advanced manufacturing. The first technology covered in Volume 1 is Additive Manufacturing (AM). AM has emerged as a very popular manufacturing process. The most common form of AM is referred to as 'three-dimensional (3D) printing'. Overall, the revolution of additive manufacturing has led to many opportunities in fabricating complex, customized, and novel products. As the number of printable materials

increases and AM processes evolve, manufacturing capabilities for future engineering systems will expand rapidly, resulting in a completely new paradigm for solving a myriad of global problems. The second technology is industrial robots, which is covered in Volume 2 on Robotics.

Traditionally, industrial robots have been used on mass production lines, where the same manufacturing operation is repeated many times. Recent advances in human-safe industrial robots present an opportunity for creating hybrid work cells, where humans and robots can collaborate in close physical proximities. This Cobots, or collaborative robots, has opened up to opportunity for humans and robots to work more closely together. Recent advances in artificial intelligence are striving to make industrial robots more agile, with the ability to adapt to changing environments and tasks. Additionally, recent advances in force and tactile sensing enable robots to be used in complex manufacturing tasks. These new capabilities are expanding the role of robotics in manufacturing operations and leading to significant growth in the industrial robotics area. The third technology covered in Volume 3 is augmented and virtual reality. Augmented and virtual reality (AR/VR) technologies are being leveraged by the manufacturing community to improve operations in a wide variety of ways. Traditional applications have included operator training and design visualization,

with more recent applications including interactive design and manufacturing planning, human and robot interactions, ergonomic analysis, information and knowledge capture, and manufacturing simulation. The advent of low-cost solutions in these areas is accepted to accelerate the rate of adoption of these technologies in the manufacturing and related sectors. Consisting of chapters by leading experts in the world, *Manufacturing in the Era of 4th Industrial Revolution* provides a reference set for supporting graduate programs in the advanced manufacturing area.

Thorough and continuous architecting is the key to overall success in software engineering, and architecture evaluation is a crucial part of it. This book presents a pragmatic architecture evaluation approach and insights gained from its application in more than 75 projects with industrial customers in the past decade. It presents context factors, empirical data, and example cases, as well as lessons learned on mitigating the risk of change through architecture evaluation. By providing comprehensive answers to more than 100 typical questions and discussing more than 60 frequent mistakes and lessons learned, the book allows readers to not only learn how to conduct architecture evaluations and interpret its results, but also to become aware of risks such as false conclusions, manipulating data, and unsound lines of argument. It

equips readers to become confident in assessing quantitative measurement results and recognize when it is better to rely on qualitative expertise. The target readership includes both practitioners and researchers. By demonstrating its impact and providing clear guidelines, data, and examples, it encourages practitioners to conduct architecture evaluations. At the same time, it offers researchers insights into industrial architecture evaluations, which serve as the basis for guiding research in this area and will inspire future research directions. Digital Humanities is a transformational endeavor that not only changes the perception, storage, and interpretation of information but also of research processes and questions. It also prompts new ways of interdisciplinary communication between humanities scholars and computer scientists. This volume offers a unique perspective on digital methods for and in the humanities. It comprises case studies from various fields to illustrate the challenge of matching existing textual research practices and digital tools. Problems and solutions with and for training tools as well as the adjustment of research practices are presented and discussed with an interdisciplinary focus.

This book covers everything you need to master the iSAQB® Certified Professional for Software Architecture - Foundation Level (CPSA-F) certification. This internationally renowned education

and certification schema defines various learning path for practical software architects. This book concentrates on the foundation level examination. It explains and clarifies all 40+ learning goals of the CPSA-F© curriculum. In addition, you find step-by-step preparation guide for the examination. Please beware: This book is not meant as a replacement for existing software architecture books and courses, but strongly focusses on explaining and clarifying the iSAQB CPSA-F foundation.

We are currently witnessing the launch and development of many new learning management system (LMS) innovations whose main objective is to meet society's requirements and the knowledge economy, which is fully emerging. Understanding new LMS innovations is essential for the improvement of the training and learning processes. To effectively implement these new LMSs in the classroom, teachers and trainers need access to real-life cases in which these methods were successfully used. New smart LMSs should be easy to use and to administer online educational content to ensure better adaptation to course teaching and learning styles. Therefore, it is necessary to find a method of modeling for all types of LMS. By combining learning theories that have long inspired the design of computer applications and putting them into perspective with emerging education features, a new smart LMS can be developed and studied. Modeling

and Prototyping New Smart Learning Management Systems is a critical scholarly resource that examines current advances in educational innovation and presents cases that allow for the improvement of personalized and active learning. It examines diverse issues of social, organizational, economic, cultural, and technological context related to internal and external management of learning and teaching and their technological improvements. The chapters cover issues, methods, models, constructs, solution applications, or specific architectures and theories in LMS and feature a wide range of topics such as higher education, teacher education, and learning strategies. This book is ideal for graduate-level students, researchers and industry practitioners, engineers, research scientists/academicians, educational administrators, educational professionals, teachers and professors, and researchers involved in practical applications of engineering-pedagogical and didactic aspects in learning management systems.

Innovate at scale through well-architected API-led products that drive personalized, predictive, and adaptive customer experiences
Key Features
Strategize your IT investments by modeling enterprise solutions with an API-centric approach
Build robust and reliable API platforms to boost business agility and omnichannel delivery
Create digital value chains through the productization of

your APIs Book Description API-centric architectures are foundational to delivering omnichannel experiences for an enterprise. With this book, developers will learn techniques to design loosely coupled, cloud-based, business-tier interfaces that can be consumed by a variety of client applications. Using real-world examples and case studies, the book helps you get to grips with the cloudbased design and implementation of reliable and resilient API-centric solutions. Starting with the evolution of enterprise applications, you'll learn how API-based integration architectures drive digital transformation. You'll then learn about the important principles and practices that apply to cloud-based API architectures and advance to exploring the different architecture styles and their implementation in Azure. This book is written from a practitioner's point of view, so you'll discover ideas and practices that have worked successfully in various customer scenarios. By the end of this book, you'll be able to architect, design, deploy, and monetize your API solutions in the Azure cloud while implementing best practices and industry standards. What you will learn Explore the benefits of API-led architecture in an enterprise Build highly reliable and resilient, cloud-based, API-centric solutions Plan technical initiatives based on Well-Architected Framework principles Get to grips with the productization and management of your API assets for value creation Design high-scale

enterprise integration platforms on the Azure cloud. Study the important principles and practices that apply to cloud-based API architectures. Who this book is for: This book is for solution architects, developers, engineers, DevOps professionals, and IT decision-makers who are responsible for designing and developing large distributed systems. Familiarity with enterprise solution architectures and cloud-based design will help you to comprehend the concepts covered in the book easily.

The usability and design in technological systems is imperative due to their abundance in numerous professional industries. Computer interfaces have seen significant advancement in their design and development as they have become an integral part of today's society. As humans continue to interact with technology on a regular basis, it is essential for professionals, professors, and students to keep pace with innovative research on interface design and the various applications interfaces have in professional fields. *Interactivity and the Future of the Human-Computer Interface* is a collection of innovative research on the development and application of interfaces in today's modern society and the generational implications for design of human and technology interaction. While highlighting topics including digital gaming, augmented reality, and e-learning, this book is ideally designed for educators, developers, web designers, researchers, technology

specialists, scientists, and students seeking current research on modern advancements and applications in human-computer interaction.

The four-volume set LNCS 6946-6949 constitutes the refereed proceedings of the 13th IFIP TC13 International Conference on Human-Computer Interaction, INTERACT 2011, held in Lisbon, Portugal, in September 2011. The fourth volume includes 27 regular papers organized in topical sections on usable privacy and security, user experience, user modelling, visualization, and Web interaction, 5 demo papers, 17 doctoral consortium papers, 4 industrial papers, 54 interactive posters, 5 organization overviews, 2 panels, 3 contributions on special interest groups, 11 tutorials, and 16 workshop papers.

The three-volume set LNCS 8016, 8017, and 8018 constitutes the refereed proceedings of the 15th International Conference on Human-Computer Interaction, HCII 2013, held in Las Vegas, NV, USA in July 2013. The total of 1666 papers and 303 posters presented at the HCII 2013 conferences was carefully reviewed and selected from 5210 submissions. These papers address the latest research and development efforts and highlight the human aspects of design and use of computing systems. The papers accepted for presentation thoroughly cover the entire field of human-computer Interaction, addressing major advances in knowledge and effective use of computers in a variety of application areas. This volume contains papers in the

thematic area of human interface and the management of Information, addressing the following major topics: interacting with information, information searching, browsing and structuring, design and development methods and tools for interactive systems and services, personalized information and interaction, cognitive and emotional aspects of interacting with information.

The software industry is regarded as one of the most creative and dynamic industries in the world. At the same time, sheltering software through copyright and patent law has been a major point of contention for the past 40 years. This doctoral thesis aims to provide new insights to this discussion. Through the use of sociological methodology, it supplies the necessary basic scientific reasearch regarding how software is developed and commercialized nowadays. Based on these findings, it then legally evaluates to what extent copyright and patent law are able to reflect these structures and determines how an optimal protection scope for computer programs could look like today. This doctoral thesis on one hand offers novel insights and points of view on existing legal doctrines. It further acknowledges as well as legally qualifies some prevailing trends in the software industry, such as Scrum and continuous delivery, that have so far been largely unaddressed by copyright and patent law.

DS/ISO/IEC 25010 (2011)Software QualityConcepts and PracticeJohn Wiley & Sons

These days, more and more software development projects are being carried out using agile methods like Scrum. Agile software development promises higher

software quality, a shorter time to market, and improved focus on customer needs. However, the transition to working within an agile methodology is not easy. Familiar processes and procedures change drastically. Software testing and software quality assurance have a crucial role in ensuring that a software development team, department, or company successfully implements long-term agile development methods and benefits from this framework. This book discusses agile methodology from the perspective of software testing and software quality assurance management. Software development managers, project managers, and quality assurance managers will obtain tips and tricks on how to organize testing and assure quality so that agile projects maintain their impact. Professional certified testers and software quality assurance experts will learn how to work successfully within agile software teams and how best to integrate their expertise. Topics include: Agile methodology and classic process models How to plan an agile project Unit tests and test first approach Integration testing and continuous integration System testing and test nonstop Quality management and quality assurance Also included are five case studies from the manufacturing, online-trade, and software industry as well as test exercises for self-assessment. This book covers the new ISTQB Syllabus for Agile Software Testing and is a relevant resource for all students and trainees worldwide who plan to undertake this ISTQB certification.

This book constitutes the proceedings of the 4th International Conference on Human Aspects of

Information Security, Privacy, and Trust, HAS 2016, held as part of the 18th International Conference on Human-Computer Interaction, HCII 2016, held in Toronto, ON, Canada, in July 2016 and received a total of 4354 submissions, of which 1287 papers were accepted for publication after a careful reviewing process. These papers address the latest research and development efforts and highlight the human aspects of design and use of computing systems. The papers thoroughly cover the entire field of Human-Computer Interaction, addressing major advances in knowledge and effective use of computers in a variety of application areas. The 25 papers presented in the HAS 2016 proceedings are organized in topical sections as follows: human factors of authentication; security, privacy, and human behavior; and security technologies.

Professional testing of software is an essential task that requires a profound knowledge of testing techniques. The International Software Testing Qualifications Board (ISTQB) has developed a universally accepted, international qualification scheme aimed at software and system testing professionals, and has created the Syllabi and Tests for the "Certified Tester." Today about 300,000 people have taken the ISTQB certification exams. The authors of *Software Testing Foundations*, 4th Edition, are among the creators of the Certified Tester Syllabus and are currently active in the ISTQB. This thoroughly revised and updated fourth edition covers the "Foundations Level" (entry level) and teaches the most important methods of software testing. It is designed for self-study and provides the information

necessary to pass the Certified Tester-Foundations Level exam, version 2011, as defined by the ISTQB. Also in this new edition, technical terms have been precisely stated according to the recently revised and updated ISTQB glossary. Topics covered: Fundamentals of Testing Testing and the Software Lifecycle Static and Dynamic Testing Techniques Test Management Test Tools Also mentioned are some updates to the syllabus that are due in 2015.

This book constitutes the thoroughly refereed post-conference proceedings of the workshops held at the 11th International Conference on Web Engineering, ICWE 2011, in Paphos, Cyprus, in June 2011. The 42 revised full papers presented were carefully reviewed and selected from numerous submissions . The papers are organized in sections on the Third International Workshop on Lightweight Composition on the Web (ComposableWeb 2011); First International Workshop on Search, Exploration and Navigation of Web Data Sources (ExploreWeb 2011); Second International Workshop on Enterprise Crowdsourcing (EC 2011); Seventh Model-Driven Web Engineering Workshop (MDWE 2011); Second International Workshop on Quality in Web Engineering (QWE 2011); Second Workshop on the Web and Requirements Engineering (WeRE 2011); as well as the Doctoral Symposium2011, and the ICWE 2011 Tutorials.

The most comprehensive General, Organic, and Biochemistry book available, Introduction to General, Organic, and Biochemistry, 11th Edition continues its tradition of a solid development of problem-solving skills,

numerous examples and practice problems, along with coverage of current applications. Written by an experienced author team, they skillfully anticipate areas of difficulty and pace the book accordingly. Readers will find the right mix of general chemistry compared to the discussions on organic and biochemistry. Introduction to General, Organic, and Biochemistry, 11th Edition has clear & logical explanations of chemical concepts and great depth of coverage as well as a clear, consistent writing style which provides great readability. An emphasis on Real-World aspects of chemistry makes the reader comfortable in seeing how the chemistry will apply to their career.

This book outlines the new concept of user engineering and covers the diversity of users, along with the business process that includes the design and the user's experience processes. Although the concept of user experience (UX) has become popular, the definition and the methodology are still ambiguous. User engineering is similar to the user-centered design, but differs in that its scope is not limited to the design process but concerns the whole manufacturing process and the whole usage process, i.e., the whole lifecycle of an artifact. User's perspective is strongly emphasized in this book, hence, its stance is far from that of the marketing approach that usually fails to notice the life and experiences of users after the purchase of an artifact as consumers. Theory of User Engineering differentiates between the quality in

design and the quality in use, and the objective quality characteristics and the subjective quality characteristics. In addition to the user research using ethnographic methods, the author introduces a new approach based on the artifact evolution theory that can be adopted in the planning stage.

Data processing, Computer software, Quality, Quality assurance, Computer programs, Software engineering techniques

This book reports on new theories and applications in the field of intelligent systems and computing. It covers computational and artificial intelligence methods, as well as advances in computer vision, current issues in big data and cloud computing, computation linguistics, and cyber-physical systems. It also reports on data mining and knowledge extraction technologies, as well as central issues in intelligent information management. Written by active researchers, the respective chapters are based on papers presented at the International Conference on Computer Science and Information Technologies (CSIT 2017), held on September 5–8, 2017, in Lviv, Ukraine; and at two workshops accompanying the conference: one on inductive modeling, jointly organized by the Lviv Polytechnic National University and the National Academy of Science of Ukraine; and another on project management, which was jointly organized by the Lviv Polytechnic National University, the

International Project Management Association, the Ukrainian Project Management Association, the Kazakhstan Project Management Association, and Nazarbayev University. Given its breadth of coverage, the book provides academics and professionals with extensive information and a timely snapshot of the field of intelligent systems, and is sure to foster new discussions and collaborations among different groups.

This book constitutes the proceedings of the 1st International Conference on Systems and Information Sciences (ICCIS), held in Manta, Ecuador, from July 27 to 29, 2020, and was jointly organized by Universidad Laica Eloy Alfaro de Manabí “ULEAM”, in collaboration with GDEON. ICCIS aims to bring together systems and information sciences researchers and developers from academia and industry around the world to discuss cutting-edge research. The book covers the following topics: AI, Expert Systems and Big Data Analytics Cloud, IoT and Distributed Computing Communications Database System and Application Financial Technologies (FinTech), Economics and Business Engineering m-Learning and e-Learning Security Software Engineering Web Information Systems and Applications General Track

The contributions in this volume set out to understand and map parts of the vast territory of specialized communication that have yet to be

charted from a research perspective. Specific aspects from the fields of translation studies, technical communication and accessibility are explored from different perspectives bringing new insights into how we conceptualize the practice of technical writing and translation. The findings of this expedition are of interest to researchers, practitioners and students of specialized communication.

The book presents a comprehensive discussion on software quality issues and software quality assurance (SQA) principles and practices, and lays special emphasis on implementing and managing SQA. Primarily designed to serve three audiences; universities and college students, vocational training participants, and software engineers and software development managers, the book may be applicable to all personnel engaged in a software projects

Features: A broad view of SQA. The book delves into SQA issues, going beyond the classic boundaries of custom-made software development to also cover in-house software development, subcontractors, and readymade software. An up-to-date wide-range coverage of SQA and SQA related topics. Providing comprehensive coverage on multifarious SQA subjects, including topics, hardly explored till in SQA texts. A systematic presentation of the SQA function and its tasks: establishing the SQA processes, planning, coordinating, follow-up,

review and evaluation of SQA processes. Focus on SQA implementation issues. Specialized chapter sections, examples, implementation tips, and topics for discussion. Pedagogical support: Each chapter includes a real-life mini case study, examples, a summary, selected bibliography, review questions and topics for discussion. The book is also supported by an Instructor's Guide.

This book focuses on innovative strategies to manage and build software systems for generating new knowledge from large archaeological data sets. The book also reports on two case studies carried out in real-world scenarios within the Cultural Heritage setting. The book presents an original conceptual framework for developing software solutions to assist the knowledge generation process in connection with large archaeological data sets and related cultural heritage information— a context in which the inputs are mainly textual sources written in freestyle, i.e. without a predetermined, standard structure. Following an in-depth exploration of recent works on the knowledge generation process in the above-mentioned context and IT-based options for facilitating it, the book proposes specific new techniques capable of capturing the structure and semantics implicit in such textual sources, and argues for using this information in the knowledge generation process. The main result is the development of a conceptual framework that can

accommodate textual sources and integrate the information included in them into a software engineering framework. The said framework is meant to assist cultural heritage professionals in general, and archaeologists in particular, in both knowledge extraction and the subsequent decision-making process.

This book constitutes the refereed proceedings of the 11th Software Quality Days Conference, SWQD 2019, held in Vienna, Austria, in January 2019. The Software Quality Days (SWQD) conference started in 2009 and has grown to the biggest conference on software quality in Europe with a strong community. The program of the SWQD conference is designed to encompass a stimulating mixture of practical presentations and new research topics in scientific presentations. The guiding conference topic of the SWQD 2019 is “The Complexity and Challenges of Software Engineering and Software Quality in the Cloud”. The 5 full papers and 3 short papers presented in this volume were carefully reviewed and selected from 17 submissions. The volume also contains 2 invited talks. The contributions were organized in topical sections named: multi-disciplinary systems and software engineering; software quality and process improvement; software testing; knowledge engineering and machine learning; source code analysis; and software maintenance.

The proceeding is a collection of research papers presented at the International Conference on Data Engineering 2013 (DaEng-2013), a conference dedicated to address the challenges in the areas of database, information retrieval, data mining and knowledge management, thereby presenting a consolidated view to the interested researchers in the aforesaid fields. The goal of this conference was to bring together researchers and practitioners from academia and industry to focus on advanced on data engineering concepts and establishing new collaborations in these areas. The topics of interest are as follows but are not limited to: • Database theory • Data management • Data mining and warehousing • Data privacy & security • Information retrieval, integration and visualization • Information system • Knowledge discovery in databases • Mobile, grid and cloud computing • Knowledge-based • Knowledge management • Web data, services and intelligence

Have you ever felt frustrated working with someone else's code? Difficult-to-maintain source code is a big problem in software development today, leading to costly delays and defects. Be part of the solution. With this practical book, you'll learn 10 easy-to-follow guidelines for delivering C# software that's easy to maintain and adapt. These guidelines have been derived from analyzing hundreds of real-world systems. Written by consultants from the Software Improvement Group (SIG), this book provides clear and concise explanations, with advice for turning the guidelines into practice. Examples for this edition are written in C#, while our companion Java book provides clear examples in that language. Write short units of code: limit the length of methods and constructors Write simple units of code: limit the number of branch points per method Write code once, rather than risk copying buggy code Keep unit interfaces small by extracting parameters into objects Separate concerns to

avoid building large classes Couple architecture components loosely Balance the number and size of top-level components in your code Keep your codebase as small as possible Automate tests for your codebase Write clean code, avoiding "code smells" that indicate deeper problems

Software Quality Assurance in Large Scale and Complex Software-intensive Systems presents novel and high-quality research related approaches that relate the quality of software architecture to system requirements, system architecture and enterprise-architecture, or software testing. Modern software has become complex and adaptable due to the emergence of globalization and new software technologies, devices and networks. These changes challenge both traditional software quality assurance techniques and software engineers to ensure software quality when building today (and tomorrow's) adaptive, context-sensitive, and highly diverse applications. This edited volume presents state of the art techniques, methodologies, tools, best practices and guidelines for software quality assurance and offers guidance for future software engineering research and practice. Each contributed chapter considers the practical application of the topic through case studies, experiments, empirical validation, or systematic comparisons with other approaches already in practice. Topics of interest include, but are not limited, to: quality attributes of system/software architectures; aligning enterprise, system, and software architecture from the point of view of total quality; design decisions and their influence on the quality of system/software architecture; methods and processes for evaluating architecture quality; quality assessment of legacy systems and third party applications; lessons learned and empirical validation of theories and frameworks on architectural quality; empirical validation and testing for assessing architecture quality. Focused on quality assurance

at all levels of software design and development Covers domain-specific software quality assurance issues e.g. for cloud, mobile, security, context-sensitive, mash-up and autonomous systems Explains likely trade-offs from design decisions in the context of complex software system engineering and quality assurance Includes practical case studies of software quality assurance for complex, adaptive and context-critical systems

The effects of recent economic and financial crises have reached an international scale. A number of different nations have experienced the fallout of these events, calling into question issues of accountability and reform in public management. The Handbook of Research on Modernization and Accountability in Public Sector Management is an essential scholarly publication that focuses on responsibility within public sector institutions and the importance of these institutions being ethical, transparent, and rigorous. Featuring coverage on a broad range of topics, such as corporate social responsibility, e-government, and financial accountability, this publication is geared toward regulatory authorities, researchers, managers, and professionals working in the public domain.

This book provides the necessary tools for the evaluation of the interaction between the user who is disabled and the computer system that was designed to assist that person. The book creates an evaluation process that is able to assess the user's satisfaction with a developed system. Presenting a new theoretical perspective in the human computer interaction evaluation of disabled persons, it takes into account all of the individuals involved in the evaluation process.

This volume constitutes the refereed proceedings of the 25th European Conference on Systems, Software and Services Process Improvement, EuroSPI conference, held in Bilbao,

Spain, in September 2018. The 56 revised full papers presented were carefully reviewed and selected from 95 submissions. They are organized in topical sections on SPI context and agility, SPI and safety testing, SPI and management issues, SPI and assessment, SPI and safety critical, gamifySPI, SPI in industry 4.0, best practices in implementing traceability, good and bad practices in improvement, safety and security, experiences with agile and lean, standards and assessment models, team skills and diversity strategies, SPI in medical device industry, empowering the future infrastructure.

The 9th European Conference on Information Management and Evaluation (ECIME) is being hosted this year by the University of the West of England, Bristol, UK on the 21-22 September 2015. The Conference Chair is Dr Elias Pimenidis, and the Programme Chair is Dr Mohammed Odeh both from the host University. ECIME provides an opportunity for individuals researching and working in the broad field of information systems management, including IT evaluation to come together to exchange ideas and discuss current research in the field. This has developed into a particularly important forum for the present era, where the modern challenges of managing information and evaluating the effectiveness of related technologies are constantly evolving in the world of Big Data and Cloud Computing. We hope that this year's conference will provide you with plenty of opportunities to share your expertise with colleagues from around the world. The keynote speakers for the Conference are Professor Haris Mouratidis, from the School of Computing, Engineering and Mathematics, University of Brighton, UK who will address the topic "Rethinking Information Systems Security", Dr Mohammed Odeh, from the University of the West of England, Bristol, UK and Dr. Mario Kossmann from Airbus, UK who will talk about "The

Significance of Information Systems Management and Evaluation in the Aerospace Industry' ECIME 2015 received an initial submission of 55 abstracts. After the double-blind peer review process 28 academic Research papers, 5 PhD Research papers, 1 Masters Research paper and 3 Work in Progress papers have been accepted for these Conference Proceedings. These papers represent research from around the world, including Austria, Botswana, Cyprus, Czech Republic, Ireland, Japan, Kuwait, New Zealand, Norway, Poland, Portugal, Slovakia, Russia, South Africa, South Korea, Sweden, The Netherlands, UK and the USA.

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