Rami 4 Object Management Group

This is one of the few titles that brings together studies that adopt laboratory based experimental economics methods to study an array of business and policy issues, spanning the entire business domain, including accounting, economics, management, marketing and cognitive science. Nach Mechanisierung, Massenfertigung und Automatisierung kommt mit Industrie 4.0 jetzt die Digitalisierung. In dieser Publikation stellen namhafte Autoren die wichtigsten Bestandteile und wesentlichen Aspekte dieses übergreifenden

Konzepts zur "Informatisierung der Wertschöpfungskette" vor. Stichpunkte aus dem Inhalt: Kernkonzepte und Basistechnologien // Standardisierungspfade // Internationale Konsortien und andere Initiativen (z. B. it's OWL) // Praxisberichte // Rechtliche Aspekte // Safety und Security // Ausbildung und Arbeitswelt // Analyse des derzeitigen Stellenwerts von Industrie 4.0 in der Praxis. Damit erschließt das Buch dem Leser die Potenziale, die sich aus der massiven Nutzung des Internets, der Integration von technischen Prozessen und Geschäftsprozessen, der digitalen Abbildung und

Virtualisierung der realen Welt und der Möglichkeit "intelligenter" Produkte ergeben. Linux Kernel Networking takes you on a guided in-depth tour of the current Linux networking implementation and the theory behind it. Linux kernel networking is a complex topic, so the book won't burden you with topics not directly related to networking. This book will also not overload you with cumbersome line-by-line code walkthroughs not directly related to what you're searching for; you'll find just what you need, with in-depth explanations in each chapter and a quick reference at the end of each chapter. Linux

Kernel Networking is the only up-to-date reference guide to understanding how networking is implemented, and it will be indispensable in years to come since so many devices now use Linux or operating systems based on Linux, like Android, and since Linux is so prevalent in the data center arena, including Linux-based virtualization technologies like Xen and KVM.

This book presents a domain of extreme industrial and scientific interest: the study of smart systems and structures. It presents polytope projects as comprehensive physical and

cognitive architectures that support the investigation, fabrication and implementation of smart systems and structures. These systems feature multifunctional components that can perform sensing, control, and actuation. In light of the fact that devices, tools, methodologies and organizations based on electronics and information technology for automation, specific to the third industrial revolution, are increasingly reaching their limits, it is essential that smart systems be implemented in industry. Polytope projects facilitate the utilization of smart systems and structures as key elements of the fourth

industrial revolution. The book begins by presenting polytope projects as a reference architecture for cyber-physical systems and smart systems, before addressing industrial process synthesis in Chapter 2. Flow-sheet trees, cyclic separations and smart configurations for multi-component separations are discussed here. In turn, Chapter 3 highlights periodic features for drug delivery systems and networks of chemical reactions, while Chapter 4 applies conditioned random walks to polymers and smart materials structures. Chapter 5 examines self-assembly and self-reconfiguration at different

scales from molecular to micro systems. Smart devices and technologies are the focus of chapter 6. Modular micro reactor systems and timed automata are examined in selected case studies. Chapter 7 focuses on inferential engineering designs, concept-knowledge, relational concept analysis and model driven architecture, while Chapter 8 puts the spotlight on smart manufacturing, industry 4.0, reference architectures and models for new product development and testing. Lastly, Chapter 9 highlights the polytope projects methodology and the prospects for smart systems and structures.

Focusing on process engineering and mathematical modeling for the fourth industrial revolution, the book offers a unique resource for engineers, scientists and entrepreneurs working in chemical, biochemical, pharmaceutical, materials science or systems chemistry, students in various domains of production and engineering, and applied mathematicians.
Formal Methods for Components and Objects
Practical Management of Pain E-Book
Relating System Quality and Software Architecture
Self-Aware Computing Systems

XXVI IJCIEOM (2nd Edition), Rio de Janeiro, Brazil, February 22–24, 2021
Practical Management of Pain
Kernkonzepte, Ergebnisse, Trends

This book presents the main theoretical foundations behind smart services as well as specific guidelines and practically proven methods on how to design them. Furthermore, it gives an overview of the possible implementation architectures and shows how the designed smart services can be realized with specific technologies. Finally, it provides four specific use cases that show how smart services have been realized in practice and what impact they have within the businesses. The first part of the book defines the basic concepts and aims to establish a shared understanding of terms, such as smart

services, service systems, smart service systems or cyber-physical systems. On this basis, it provides an analysis of existing work and includes insights on how an organization incorporating smart services could enhance and adjust their management and business processes. The second part on the design of smart services elaborates on what constitutes a successful smart service and describes experiences in the area of interdisciplinary teams, strategic partnerships, the overall service systems and the common data basis. In the third part, technical reference architectures are presented in detail, encompassing topics on the design of digital twins in cyber physical systems, the communication between entities and sensors in the age of Industry 4.0 as well as data management and integration. The fourth part then highlights a number of analytical possibilities that can be realized and that can constitute or be part of smart services, including machine

learning and artificial intelligence methods. Finally, the applicability of the introduced design and development method is demonstrated by considering specific real-world use cases. These include services in the industrial and mobility sector, which were developed in direct cooperation with industry partners. The main target audience of this book is industry-focused readers, especially practitioners from industry, who are involved in supporting and managing digital business. These include professionals working in business development, product management, strategy, and development, ranging from middle management to Chief Digital Officers. It conveys all the basics needed for developing smart services and successfully placing them on the market by explaining technical aspects as well as showcasing practical use cases.

Verifying the security posture as a system evolves is indispensable for

building deployable software systems. Traditional security testing lacks flexibility in (1) providing early feedback to the architect on the ability of the software to predict security threats so that changes are made before the system is built, (2) responding to changes in user and behavior requirements that could affect the security of software, and (3) offering real design fixes that do not merely hide the symptoms of the problem (i.e., patching). We motivate the need for an architecture-level testing for security grounded on incremental and continuous refinements to support agile principles. We use architecture as an artifact for initiating the testing process for security through subsequent and iterative refinements. We extend the use of implied scenario to reveal undesirable behavior caused by ambiguities in users' requirements and we analyze detection their security implications. This approach demonstrates how architecture-centric evaluation and

analysis can assist in securing systems developed using an agile development cycle. We apply this approach to a case study to evaluate the security of identity management architectures. We reflect on the effectiveness of this approach in detecting vulnerable behaviors and the cost-effectiveness of refining the architecture before vulnerabilities are built into the system.

For more than 40 years, Computerworld has been the leading source of technology news and information for IT influencers worldwide. Computerworld's award-winning Web site (Computerworld.com), twice-monthly publication, focused conference series and custom research form the hub of the world's largest global IT media network.

Software Architecture for Big Data and the Cloud is designed to be a single resource that brings together research on how software architectures can solve the challenges imposed by building big data

software systems. The challenges of big data on the software architecture can relate to scale, security, integrity, performance, concurrency, parallelism, and dependability, amongst others. Big data handling requires rethinking architectural solutions to meet functional and non-functional requirements related to volume, variety and velocity. The book's editors have varied and complementary backgrounds in requirements and architecture, specifically in software architectures for cloud and big data, as well as expertise in software engineering for cloud and big data. This book brings together work across different disciplines in software engineering, including work expanded from conference tracks and workshops led by the editors. Discusses systematic and disciplined approaches to building software architectures for cloud and big data with state-of-the-art methods and techniques Presents case studies involving enterprise, business, and

government service deployment of big data applications Shares guidance on theory, frameworks, methodologies, and architecture for cloud and big data

Industrial Engineering and Operations Management

Advancing Technology and Educational Development through Blended Learning in Emerging Economies

Proceedings of ICT4SD 2019, Volume 2

Information Technology in Educational Management

Industrie 4.0 im internationalen Kontext

Fundamental Approaches to Software Engineering 4th International Symposium, FMCO 2005, Amsterdam, The Netherlands, November 1-4, 2005, Revised Lectures

Manufacturing companies need to adapt to the requirements of functioning in the era of

Industry 4.0 and major technological disruptions. The use of knowledge-based decision support tools has also become necessary in order for enterprises to survive in a competitive environment. This book offers a new approach to designing the knowledge management process and integrating it with the implementation of Industry 4.0 technology. The book presents the methods used in a customer-oriented organization under the Management of Manufacturing Knowledge (M-Know Process). More specifically, methods for defining and collecting customer requirements are

presented and methods on how to receive manufacturing knowledge, as well as how to formalise the acquired knowledge using key technologies of Industry 4.0, are discussed. The author also presents real case studies from western and central Europe and offers recommendations for the production manager. The instrumentation of methods and tools to support knowledge management, in the production of individualised products presented therein, will allow the manufacturing company to be transformed digitally, into a customer-oriented organisation operating in accordance with the

assumptions of Industry 4.0. This book will be a valuable read for production researchers, academicians, PhD students and postgraduate level students of industrial engineering and industrial management. The practical case studies will also make the book a useful resource for managers of manufacturing enterprises.

Rev. ed. of: Raj's practical management of pain / [edited by] Honorio T. Benzon ... [et al.]. 4th ed. 2008.

InfoWorld is targeted to Senior IT professionals. Content is segmented into Channels and Topic Centers. InfoWorld also

celebrates people, companies, and projects. This book constitutes the refereed proceedings of the 6th International Conference on the Unified Modelling Language, UML 2003, held in San Francisco, CA, USA in October 2003. The 25 revised full papers, 4 tool papers, and 1 experience paper presented together with the abstracts of 3 invited talks and summaries on the UML 2003 workshop and tutorials were carefully reviewed and selected from initially 168 submissions. The papers are organized in topical sections on practical model management, time and quality of service, tools, composition and

architecture, transformation, Web related issues, testing and validation, improving UML/OCL, consistency, and methodology.
Handbook of Collaborative Management Research
8th International Conference, FASE 2005, Held as Part of the Joint European Conferences on Theory and Practice of Software, ETAPS 2005, Edinburgh, UK, April 4-8, 2005, Proceedings
Cyber-Physical Systems
Directory of Corporate Affiliations
Digital Transformation of Supply Chain Management
Computerworld
UML ... : ... International Workshop ... :

Selected Papers

This book proposes new technologies and discusses future solutions for ICT design infrastructures, as reflected in high-quality papers presented at the 4th International Conference on ICT for Sustainable Development (ICT4SD 2019), held in Goa, India, on 5–6 July 2019. The conference provided a valuable forum for cutting-edge research discussions among pioneering researchers, scientists, industrial engineers, and students from all around the world. Bringing together experts from different countries, the book explores a range of central issues from an international perspective.

This book focuses on new developments in polytopic projects, particularly on implementation domains and case studies, as

well as high-dimensional methodology. Polytopic projects are based on a general reference architecture inspired and shared by the functional organization of organisms and enterprises as informational and cognitive systems, the scientific and engineering methodology and the operational structure of existing self-evolvable and self-sustainable systems.

This volume provides new conceptual insights to help organizations improve health and wellbeing in society. Some chapters do this by addressing macro-level change, some by highlighting evidence-based change at the micro level, and others by extending theory and integrating perspectives that heretofore have remained separate.

For more than 30 years, Practical Management of Pain has

offered expert guidance to both clinicians and trainees, covering every aspect of acute and chronic pain medicine for adult and pediatric patients. The fully revised 6th Edition brings you fully up to date with new developments in patient evaluation, diagnosis of pain syndromes, rationales for management, treatment modalities, and much more. Edited by a team of renowned pain clinicians led by Dr. Honorio Benzon, this authoritative reference is a comprehensive, practical resource for pain diagnosis and treatment using a variety of pharmacologic and physical modalities. Presents a wealth of information in a clearly written, easily accessible manner, enabling you to effectively assess and draw up an optimal treatment plan for patients with acute or chronic pain.

Takes a practical, multidisciplinary approach, making key concepts and techniques easier to apply to everyday practice. Shares the knowledge and expertise of global contributors on all facets of pain management, from general principles to specific management techniques. Discusses the latest, best management techniques, including joint injections, ultrasound-guided therapies, and new pharmacologic agents such as topical analgesics. Covers recent global developments regarding opioid induced hyperalgesia, neuromodulation and pain management, and identification of specific targets for molecular based pain. Includes current information on the use of cannabinoids in pain management and related regulatory, professional, and legal considerations. Includes the latest

guidelines on facet injections and safety of contrast agents. Provides new, evidence-based critical analysis on treatment modality outcomes and the latest information on chronic pain as a result of surgical interventions.

Evolutionary Trends of the Internet

17th ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications : Conference Proceedings : November 4-8, 2002, Washington State Convention and Trade Center, Seattle, Washington, USA

Technologies and Applications

Foundations and Techniques

OOPSLA 2002

UML 2003 -- The Unified Modeling Language, Modeling

Languages and Applications
Advances in Petri Nets
Educational institutions in which administrators, managers and teachers will be working in the late 1990's will be far different from those oftoday. Schools, which until recently were lagging behind in the implementation of information technology (IT) in their administration and management, are now attempting to close the gap. A massive and rapid computerization process in schools, school districts and throughout the other levels of the educational system, including universities, has made computers

an integral part of the educational management scene. A computer on the desk of every educational management statT might become a reality in the near future. The term "IT" includes three main components: hardware, software - mainly management information systems (MIS)/decision support systems (DSS) and human factors. Presently, successful implementation depends on adequate software and on human factors. MIS/DSSs are being implemented with the aim of providing meaningful support for school employees in their daily activities, and to improve their performance, etfectiveness and efficiency. Much like at universities,

usable and accessible school databases are being established, encompassing data on students, teachers, employees, classrooms, grade levels, courses, student achievements and behavior, school space, curriculum, finance, inventory, transportation, etc.

This book constitutes the refereed proceedings of the Thyrrhenian International Workshop on Digital Communication, IWDC 2001, held in Taormina, Italy in September 2001. The 46 revised full papers presented are a mix of invited papers and selected submitted papers and reflect the state of the art in

multiservice IP network research and development. The book offers topical sections on WDM technologies for the next generation Internet, mobile and wireless Internet access, QoS in the next generation Internet, multicast and routing in IP networks, mulitmedia services over the Internet, performance of Internet protocols, dynamic service management, and source encoding and Internet applications.

Directory is indexed by name (parent and subsidiary), geographic location, Standard Industrial Classification (SIC) Code, and corporate responsibility.

Business innovation and industrial intelligence are paving the way for a future in which smart factories, intelligent machines, networked processes and Big Data are combined to foster industrial growth. The maturity and growth of instrumentation, monitoring and automation as key technology drivers support Industry 4.0 as a viable, competent and actionable business model. This book offers a primer, helping readers understand this paradigm shift from industry 1.0 to industry 4.0. The focus is on grasping the necessary pre-conditions, development & technological aspects that conceptually describe this

transformation, along with the practices, models and real-time experience needed to achieve sustainable smart manufacturing technologies. The primary goal is to address significant questions of what, how and why in this context, such as:What is Industry 4.0?What is the current status of its implementation?What are the pillars of Industry 4.0?How can Industry 4.0 be effectively implemented?How are firms exploiting the Internet of Things (IoT), Big Data and other emerging technologies to improve their production and services?How can the implementation of Industry 4.0 be accelerated?How is Industry 4.0 changing the

workplace landscape?Why is this melding of the virtual and physical world needed for smart production engineering environments?Why is smart production a game-changing new form of product design and manufacturing?

Linux Kernel Networking

Research in Organizational Change and Development

Disruptive Technology: Concepts, Methodologies, Tools, and Applications

Managing Manufacturing Knowledge in Europe in the Era of Industry 4.0

2001 Thyrrhenian International Workshop on Digital

Communications, IWDC 2001, Taormina, Italy, September 17-20, 2001. Proceedings
ICT Analysis and Applications
Experimental Business Research
Eine nachhaltige und sichere Optimierung des maritimen Transportprozesses soll gemäß der International Maritime Organization (IMO) u.a. durch die Kopplung see- und landseitiger maritimer Systeme erfolgen. Ein erforderlicher harmonisierter Informationsaustausch

zwischen existierenden und künftigen Systemen bzw. Systemkomponenten wird unter dem Begriff e-Navigation international vorangetrieben. Dabei soll nicht nur eine technische Interoperabilität zwischen den Systemen gewährleistet, sondern auch menschliche Nutzer und existierende Regularien berücksichtigt werden. Für die Unterstützung dieser Harmonisierung sowie für die Integration von Systemen in eine (bestehende) Systemumgebung

muss eine umfassende Sicht auf die jeweiligen Systeme innerhalb des maritimen Kontexts aus verschiedenen technischen und nicht-technischen Perspektiven ermöglicht werden. Der in dieser Arbeit betrachtete Ansatz einer Entwicklung eines maritimen Architekturframeworks ermöglicht den Anwendern auf formale Art und Weise, die Eigenschaften von Systemen zu erfassen. Auf dieser Basis können Architekturmodelle erstellt werden, die

eine ganzheitliche Betrachtung des entsprechenden Systems innerhalb der maritimen Domäne und ihrer Merkmale ermöglicht. Im Zuge dessen unterstützt das entwickelte Prinzip verschiedene Betrachtungsmöglichkeiten zur Identifikation einer internen Konsistenz oder von Interoperabilitätsmerkmalen in und zwischen den betrachteten Systemen. Die vorgestellte Arbeit vereint Merkmale aus dem Systems Engineering, dem System

of Systems Engineering sowie insbesondere aus dem Enterprise Architecture Management in einem Ansatz. Dieser beinhaltet die Entwicklung einer geeigneten Methodik zur Erfassung und Beschreibung einer Systemarchitektur sowie die Entwicklung einer Struktur zur Erstellung von Architekturmodellen unter Berücksichtigung maritimer Charakteristiken. Hinzu kommen weitere Aspekte, die im Rahmen der Arbeit

Berücksichtigung finden. Dazu zählen sowohl ein Anforderungsmanagement als auch die Nutzung des Ansatzes für potentielle Analysen.
This book has a focus on the development and deployment of the Industrial Internet of Things (IIoT) paradigm, discussing frameworks, methodologies, benefits and limitations, as well as providing case studies of employing the IoT vision in the industrial domain. IIoT is becoming

an attractive business reality for many organisations such as manufacturing, logistics, oil and gas, energy and other utilities, mining, aviation, and many more. The opportunities for this paradigm are huge, and according to one report, the IIoT market is predicted to reach $125 billion by 2021. The driving philosophy behind the IIoT is that smart machines are better than humans at accurately capturing, analysing and communicating real-time data. The

underlying technologies include distributed computing, machine learning, artificial intelligence, and machine-to-machine communication, with a typical IIoT system consisting of intelligent systems (applications, controllers, sensors, and security mechanisms), data communication infrastructure (cloud computing, edge computing, etc.), data analytics (to support business intelligence and corporate decision making), and most

importantly the human element. The promised benefits of the IIoT include enhanced safety, better reliability, smart metering, inventory management, equipment tracking, and facilities management. There are, however, numerous issues that are also becoming the focus of active research, such as concerns regarding service availability, data security, and device communication. Lack of ubiquitous interoperability between heterogeneous

devices is also a major concern. This book intends to fill a gap in the IIoT literature by providing the scientific contributions and latest developments from researchers and practitioners of international repute, focusing on frameworks, methodologies, benefits, and inherent issues/barriers to connected environments, especially in industrial settings. The intended audience includes network specialists, hardware engineers, and security

experts who wish to adopt newer approaches for device connectivity, IoT security, and sensor-based devices design. University level students, researchers and practitioners will also find the latest innovation in technology and newer approaches relevant to the IIoT from a distributed computing perspective.

Implementing Polytope Projects for Smart SystemsSpringer

This book provides formal and informal

definitions and taxonomies for self-aware computing systems, and explains how self-aware computing relates to many existing subfields of computer science, especially software engineering. It describes architectures and algorithms for self-aware systems as well as the benefits and pitfalls of self-awareness, and reviews much of the latest relevant research across a wide array of disciplines, including open research challenges. The chapters of

this book are organized into five parts: Introduction, System Architectures, Methods and Algorithms, Applications and Case Studies, and Outlook. Part I offers an introduction that defines self-aware computing systems from multiple perspectives, and establishes a formal definition, a taxonomy and a set of reference scenarios that help to unify the remaining chapters. Next, Part II explores architectures for self-aware

computing systems, such as generic concepts and notations that allow a wide range of self-aware system architectures to be described and compared with both isolated and interacting systems. It also reviews the current state of reference architectures, architectural frameworks, and languages for self-aware systems. Part III focuses on methods and algorithms for self-aware computing systems by addressing issues

pertaining to system design, like modeling, synthesis and verification. It also examines topics such as adaptation, benchmarks and metrics. Part IV then presents applications and case studies in various domains including cloud computing, data centers, cyber-physical systems, and the degree to which self-aware computing approaches have been adopted within those domains. Lastly, Part V surveys open challenges and future

research directions for self-aware computing systems. It can be used as a handbook for professionals and researchers working in areas related to self-aware computing, and can also serve as an advanced textbook for lecturers and postgraduate students studying subjects like advanced software engineering, autonomic computing, self-adaptive systems, and data-center resource management. Each chapter is largely self-contained, and

offers plenty of references for anyone wishing to pursue the topic more deeply.

InfoWorld

Smart Service Management

Software Architecture for Big Data and the Cloud

Interventional Management of Chronic Visceral Pain Syndromes

Chapter 10. Architecture-Centric Testing for Security: An Agile Perspective

Lectures on Concurrency and Petri Nets
Security and Device Connectivity, Smart Environments, and Industry 4.0

Industrial revolutions have impacted both, manufacturing and service. From the steam engine to digital automated production, the industrial revolutions have conduced significant changes in operations and supply chain management (SCM) processes. Swift changes in manufacturing and service systems have led to phenomenal improvements in

productivity. The fast-paced environment brings new challenges and opportunities for the companies that are associated with the adaptation to the new concepts such as Internet of Things (IoT) and Cyber Physical Systems, artificial intelligence (AI), robotics, cyber security, data analytics, block chain and cloud technology. These emerging technologies facilitated and expedited the birth of Logistics 4.0. Industrial Revolution

4.0 initiatives in SCM has attracted stakeholders' attentions due to it is ability to empower using a set of technologies together that helps to execute more efficient production and distribution systems. This initiative has been called Logistics 4.0 of the fourth Industrial Revolution in SCM due to its high potential. Connecting entities, machines, physical items and enterprise resources to each other by using sensors, devices and the internet

along the supply chains are the main attributes of Logistics 4.0. IoT enables customers to make more suitable and valuable decisions due to the data-driven structure of the Industry 4.0 paradigm. Besides that, the system's ability of gathering and analyzing information about the environment at any given time and adapting itself to the rapid changes add significant value to the SCM processes. In this peer-reviewed book, experts from all over

the world, in the field present a conceptual framework for Logistics 4.0 and provide examples for usage of Industry 4.0 tools in SCM. This book is a work that will be beneficial for both practitioners and students and academicians, as it covers the theoretical framework, on the one hand, and includes examples of practice and real world.

Offering timely coverage of this complex field, Interventional

Management of Chronic Visceral Pain Syndromes is a practical, evidence-based guide for the mechanisms, presentation, diagnosis, and treatments of chronic non-malignant and malignant abdominal pain syndromes. Experienced clinicians and academic leaders in pain medicine comprehensively discuss best-practice guidelines using the newest interventional techniques, including dorsal root ganglion stimulation, high frequency spinal cord stimulation, and

low-dose intrathecal infusion pumps. Coverage includes malignant and non-malignant gastrointestinal pain, malignant and non-malignant pelvic pain in males and females, rectal pain, and chest pain. Discusses key demographic characteristics as well as clinical and diagnostic presentations of the most common and esoteric visceral pain syndromes that will enable clinicians to identify pain generators. Provides a truly systematic approach to the

treatment of chronic visceral pain, including the use of pharmacologic, non-interventional, interventional, and multidisciplinary therapies with evidence-based data. Covers the indications, contraindications, and outcomes results of the newest interventional treatments that all clinicians should be aware of, including neuromodulation and intrathecal pump therapy.

System Quality and Software

Architecture collects state-of-the-art knowledge on how to intertwine software quality requirements with software architecture and how quality attributes are exhibited by the architecture of the system. Contributions from leading researchers and industry evangelists detail the techniques required to achieve quality management in software architecting, and the best way to apply these techniques effectively in various application domains (especially in

cloud, mobile and ultra-large-scale/internet-scale architecture) Taken together, these approaches show how to assess the value of total quality management in a software development process, with an emphasis on architecture. The book explains how to improve system quality with focus on attributes such as usability, maintainability, flexibility, reliability, reusability, agility, interoperability, performance, and

more. It discusses the importance of clear requirements, describes patterns and tradeoffs that can influence quality, and metrics for quality assessment and overall system analysis. The last section of the book leverages practical experience and evidence to look ahead at the challenges faced by organizations in capturing and realizing quality requirements, and explores the basis of future work in this area. Explains how design

decisions and method selection influence overall system quality, and lessons learned from theories and frameworks on architectural quality Shows how to align enterprise, system, and software architecture for total quality Includes case studies, experiments, empirical validation, and systematic comparisons with other approaches already in practice. ?This proceedings volume gathers together selected peer-reviewed papers

presented at the second edition of the XXVI International Joint Conference on Industrial Engineering and Operations Management (IJCIEOM), which was virtually held on February 22-24, 2021 with the main organization based at the Pontifical Catholic University of Rio de Janeiro, Brazil. Works cover a range of topics in industrial engineering, including operations and process management, global operations, managerial economics, data science and

stochastic optimization, logistics and supply chain management, quality management, product development, strategy and organizational engineering, knowledge and information management, sustainability, and disaster management, to name a few. These topics broadly involve fields like operations, manufacturing, industrial and production engineering, and management. This book can be a valuable resource for researchers and

practitioners in optimization research, operations research, and correlated fields.

Agile Software Architecture

Advanced Polytopic Projects

8th IFIP WG 5.5 International Precision Assembly Seminar, IPAS 2018, Chamonix, France, January 14–16, 2018, Revised Selected Papers

Precision Assembly in the Digital Age

Logistics 4.0

Design Guidelines and Best Practices

This tutorial volume originates from the 4th Advanced Course on Petri Nets, ACPN 2003, held in Eichsttt, Germany in September 2003. In addition to lectures given at ACPN 2003, additional chapters have been commissioned to give a well-balanced presentation of the state of the art in the area. This book will be useful as both a reference for those working in the area as well as a study book for the reader who is interested in an up-to-date overview of research and development in concurrent and distributed systems; of

course, readers specifically interested in theoretical or applicational aspects of Petri nets will appreciate the book as well. CYBER-PHYSICAL SYSTEMS The 13 chapters in this book cover the various aspects associated with Cyber-Physical Systems (CPS) such as algorithms, application areas, and the improvement of existing technology such as machine learning, big data and robotics. Cyber-Physical Systems (CPS) is the interconnection of the virtual or cyber and the physical system. It is realized by

combining three well-known technologies, namely "Embedded Systems," "Sensors and Actuators," and "Network and Communication Systems." These technologies combine to form a system known as CPS. In CPS, the physical process and information processing are so tightly connected that it is hard to distinguish the individual contribution of each process from the output. Some exciting innovations such as autonomous cars, quadcopter, spaceships, sophisticated medical devices fall under CPS.

The scope of CPS is tremendous. In CPS, one sees the applications of various emerging technologies such as artificial intelligence (AI), Internet of Things (IoT), machine learning (ML), deep learning (DL), big data (BD), robotics, quantum technology, etc. In almost all sectors, whether it is education, health, human resource development, skill improvement, startup strategy, etc., one sees an enhancement in the quality of output because of the emergence of CPS into the field. Audience Researchers in Information

technology, artificial intelligence, robotics, electronics and electrical engineering. The proliferation of entrepreneurship, technological and business innovations, emerging social trends and lifestyles, employment patterns, and other developments in the global context involve creative destruction that transcends geographic and political boundaries and economic sectors and industries. This creates a need for an interdisciplinary exploration of disruptive technologies, their impacts, and

their implications for various stakeholders widely ranging from government agencies to major corporations to consumer groups and individuals. Disruptive Technology: Concepts, Methodologies, Tools, and Applications is a vital reference source that examines innovation, imitation, and creative destruction as critical factors and agents of socio-economic growth and progress in the context of emerging challenges and opportunities for business development and strategic advantage. Highlighting a range of

topics such as IT innovation, business strategy, and sustainability, this multi-volume book is ideally designed for entrepreneurs, business executives, business professionals, academicians, and researchers interested in strategic decision making using innovations and competitiveness.

A comprehensive overview of the Internet of Things' core concepts, technologies, and applications Internet of Things A to Z offers a holistic approach to the Internet of Things (IoT) model. The Internet of Things refers to

uniquely identifiable objects and their virtual representations in an Internet-like structure. Recently, there has been a rapid growth in research on IoT communications and networks, that confirms the scalability and broad reach of the core concepts. With contributions from a panel of international experts, the text offers insight into the ideas, technologies, and applications of this subject. The authors discuss recent developments in the field and the most current and emerging trends in IoT. In addition, the text is filled

with examples of innovative applications and real-world case studies. Internet of Things A to Z fills the need for an up-to-date volume on the topic. This important book: Covers in great detail the core concepts, enabling technologies, and implications of the Internet of Things Addresses the business, social, and legal aspects of the Internet of Things Explores the critical topic of security and privacy challenges for both individuals and organizations Includes a discussion of advanced topics such as the need for

standards and interoperability Contains contributions from an international group of experts in academia, industry, and research Written for ICT researchers, industry professionals, and lifetime IT learners as well as academics and students, Internet of Things A to Z provides a much-needed and comprehensive resource to this burgeoning field.

The Unified Modeling Language

10th International Conference, BPM 2012, Tallinn, Estonia, September 3-6, 2012,

Proceedings
A Roadmap to Industry 4.0: Smart Production, Sharp Business and Sustainable Development
Business Process Management
Volume III: Marketing, Accounting and Cognitive Perspectives
6th International Conference San Francisco, CA, USA, October 20-24, 2003, Proceedings
Implementing Polytope Projects for Smart Systems

This handbook provides the latest thinking, methodologies

and cases in the rapidly growing area of collaborative management research. What makes collaborative management research different is its emphasis on creating a close partnership between scholars and practitioners in the search for knowledge concerning organizations and complex systems. In the ideal situation, scholars and their managerial partners would work together to define the research focus, develop the methods to be used for data collection, participate equally in the analysis of data, and work together in the application and dissemination of knowledge. The handbook contains insightful reflections on the state of the art as well as detailed descriptions of the collaborative efforts of an international group of leading

edge academics and their practitioner counterparts. The applications of collaborative research methods included in this volume include those aimed at individual development, organizational development, regional development efforts and economic policy. The insights from the cases suggest that collaborative management research has been a highly effective means of getting at issues that other research methods and intervention techniques have failed to address. The rationale for conducting this highly engaging type of research is explored in the first section of the handbook, followed by sections that offer new methodologies, descriptive cases, views from those directly involved, and issues and enablers about the use of this

approach in advancing knowledge and practice. The handbook does appeal to scholarly practitioners as well as practical scholars.

This book presents 19 revised invited keynote lectures and revised tutorial lectures given at the 4th International Symposium on Formal Methods for Components and Objects, FMCO 2005, Amsterdam, November 2005. The book provides a unique combination of ideas on software engineering and formal methods that reflect the current interest in the application or development of formal methods for large scale software systems such as component-based systems and object systems.

This book constitutes the refereed post-conference

proceedings of the 8th IFIP WG 5.5 International Precision Assembly Seminar, IPAS 2018, held in Chamonix, France, in January 2018. The 20 revised full papers were carefully reviewed and selected from numerous submissions. The papers address topics such as machine vision and metrology for assembly operations, gripping and handling technologies, numerical methods and planning in assembly, digital technologies and Industry 4.0 applications, precision assembly methods, assembly systems and platforms and human cooperation, and machine learning. They are organized in the following topical sections: design and deployment of assembly systems; human robot cooperation and machine vision;

assembly methods and models; digital technologies and industry 4.0 applications; and gripping and handling solutions in assembly.

ETAPS 2005 was the eighth instance of the European Joint Conferences on Theory and Practice of Software. ETAPS is an annual federated conference that was established in 1998 by combining a number of existing and new conf- ences. This year it comprised ?ve conferences (CC, ESOP, FASE, FOSSACS, TACAS), 17 satellite workshops (AVIS, BYTECODE, CEES, CLASE, CMSB, COCV, FAC, FESCA, FINCO, GCW-DSE, GLPL, LDTA, QAPL, SC, SLAP, TGC, UITP), seven invited lectures (not including those that were speci?c to the satellite events), and several

tutorials. We received over 550 submissions to the ?ve conferences this year, giving acceptance rates below 30% for each one. Congratulations to all the authors who made it to the ?nal program! I hope that most of the other authors still found a way of participating in this exciting event and I hope you will continue submitting. The events that comprise ETAPS address various aspects of the system - velopment process, including speci?cation, design, implementation, analysis and improvement. The languages, methodologies and tools which support these - tivities are all well within its scope. Di?erent blends of theory and practice are represented, with an inclination towards theory with a practical motivation on the one

hand and soundly based practice on the other. Many of the issues involved in software design apply to systems in general, including hardware s- tems,andtheemphasisonsoft wareisnotintendedtobeexclusive.

Implementation and Theory

Ein Framework zur Architekturbeschreibung von sozio-technischen maritimen Systemen

Internet of Things A to Z

The Internet of Things in the Industrial Sector

Concepts, Methodologies, Tools, and Applications

This book constitutes the proceedings of the 10th International Conference on Business Process Management, BPM 2012, held in Tallinn, Estonia, in

September 2012. The 17 regular papers and 7 short papers included in this volume were carefully reviewed and selected from 126 submissions. The book also features two keynote lectures which were given at the conference. The papers are organized in topical sections named: process quality; conformance and compliance; BPM applications; process model analysis; BPM and the cloud; requirements and performance; process mining; and refactoring and optimization.

Blended learning continues to emerge as a more proactive and high quality method of teaching and learning. Yet as the academic landscape shifts towards technology-based efforts, the lack of economic support in developing

countries has hindered its educational growth. Advancing Technology and Educational Development through Blended Learning in Emerging Economies provides an insight on blended learning approaches and its importance in the educational development of emerging economies. This book is a vital resource for researchers, academics, professionals, and students involved in the management and organizational development of technology use in educational settings.