

Resource Oriented Architecture Patterns For Webs Of Data Synthesis Lectures On The Semantic Web Theory And Technology

This volume provides an overview and an understanding of REST (Representational State Transfer). Discussing the constraints of REST the book focuses on REST as a type of web architectural style. The focus is on applying REST beyond Web applications (i.e., in enterprise environments), and in reusing established and well-understood design patterns when doing so. The reader will be able to understand how RESTful systems can be designed and deployed, and what the results are in terms of benefits and challenges encountered in the process. Since REST is relatively new as an approach for designing Web Services, the more advanced part of the book collects a number of challenges to some of the assumptions and constraints of REST, and looks at current research work on how REST can be extended and applied to scenarios that often are considered not to be a good match for REST. This work will help readers to reach a deeper understanding of REST on a practical as well as on an advanced level.

This book constitutes the proceedings of the 11th International Conference on Web Information Systems Engineering, WISE 2010, held in Hong Kong, China, in December 2010. The 32 revised full papers and 19 revised short papers presented together with 4 keynote talks were carefully reviewed and selected from 170 submissions. The papers are organized in topical sections on web service, social networks, web data mining, keyword search, web data modeling, recommender systems, RDF and web data processing, XML and query languages, web information systems, and information retrieval and extraction.

This timely volume provides a review of the state-of-the-art frameworks and methodologies for connecting diverse objects and devices according to the vision for an Internet of Things (IoT). A specific focus is placed on the communication, security, and privacy aspects of device connectivity in distributed environments. Insights and case studies are provided by an authoritative selection of contributors of international repute into the latest research advances and practical approaches with respect to the connectivity of heterogeneous smart and sensory devices. Topics and features: Examines aspects of device connectivity within the IoT Presents a resource-based architecture for IoT, and proposes a resource management framework for corporate device clouds Reviews integration approaches for the IoT environment, and discusses performance optimization of intelligent home networks Introduces a novel solution for interoperable data management in multi-clouds, and suggests an approach that addresses the debate over network neutrality in the IoT Describes issues of data security, privacy, access control, and authentication in the distributed IoT environment Reviews the evolution of VANETs in relation to the Internet of Vehicles, and provides a perspective on developing smart sustainable cities This invaluable text/reference will be of great benefit to a broad audience, from students and researchers interested in the IoT vision, to practicing communication engineers and network security specialists.

Resource-oriented Architecture Patterns for Webs of Data Morgan & Claypool

This proceedings volume contains selected revised and extended research articles written by researchers who participated in the World Congress on Engineering and Computer Science 2015, held in San Francisco, USA, 21-23 October 2015. Topics covered include engineering mathematics, electrical engineering, circuits, communications systems, computer science, chemical engineering, systems engineering, manufacturing engineering, and industrial applications. The book offers the reader an overview of the state of the art in engineering technologies, computer science, systems engineering and applications, and will serve as an excellent reference work for researchers and graduate students working in these fields.

This book fills a gap between high-level overview texts that are often too general and low-level detail oriented technical handbooks that lose sight the "big picture". This book discusses SOA from the low-level perspective of middleware, various XML-based technologies, and basic service design. It also examines broader implications of SOA, particularly where it intersects with business process management and process modeling. Concrete overviews will be provided of the methodologies in those fields, so that students will have a hands-on grasp of how they may be used in the context of SOA.

Web Oriented Architecture (WOA) is a style of software architecture that extends service-oriented architecture (SOA) to web based applications, and is sometimes considered to be a light-weight version of SOA. WOA is also aimed at maximizing the browser and server interactions by use of technologies such as REST and POX. This book is your ultimate resource for Web-Oriented Architecture. Here you will find the most up-to-date information, analysis, background and everything you need to know. In easy to read chapters, with extensive references and links to get you to know all there is to know about Web-Oriented Architecture right away, covering: Web-oriented architecture, Adaptive Services Grid, Application fabrication, B2B Gateway, Barracuda Networks, Boomerang Software Framework, Business Process Network, Canonical Protocol Pattern, Canonical Schema pattern, Communications-enabled application, Composite application, DataNucleus, Denodo, Differentiated service, Digital Nervous System, Domain Inventory Pattern, Enterprise Inventory, Enterprise service bus, Enterprise Service Layer, Entity Abstraction Pattern, Event-driven architecture, Event-Driven Messaging, Event-driven SOA, Experticity, Freightgate, FuseSource Corp., Intel SOA Products Division, JackBe, Logic Centralization Pattern, Loose coupling, Machine-to-Machine, Midas Kapiti, Multitenancy, Mushroom Networks, MVaaS, Net-Centric Enterprise Services, Network-Centric Service-Oriented Enterprise (NCSE), OASIS SOA Reference Model, Open Knowledge Initiative, Open Mashup Alliance, Open Service Interface Definitions, Opti-Time Company, Oslo (Microsoft), Postini, Reliable messaging, S-RAMP, SAP Enterprise Architecture Framework, Semantic service-oriented architecture, SEMCI, Service (systems architecture), Service Abstraction, Service Autonomy Principle, Service Capability Interaction Manager, Service Component Architecture, Service Composability Principle, Service Data Objects, Service Discoverability Principle, Service discovery, Service layer, Service Layers Pattern, Service Loose Coupling, Service Normalization Pattern, Service Oriented Architecture Fundamentals, Service Refactoring, Service Reusability Principle, Service Statelessness Principle, Service-orientation, Service-Oriented Design Principles, Service-oriented architecture, Service-oriented architecture implementation framework, Service-Oriented Architecture Types, Service-Oriented Development of Applications, Service-oriented device architecture, Service-oriented infrastructure, Service-oriented modeling, Service-oriented programming, Service-oriented transformation, Services computing, Shared services, SOA environment, SOA Governance, SOA Security, SOALIB, SoaML, Nsite Software (Platform as a Service), Software as a service, Standardized Service Contract, TOA Technologies, Utility Abstraction Pattern, Web Service Choreography, Apache ActiveMQ, Apache Camel, Apache Qpid, Apache ServiceMix, Apache Synapse, Apache Tuscan, Apatar, Application Response Measurement, Boot image control, Comparison of business integration software, Canonical Model, Corticon, Data element, E-Biz Integrator, Enterprise application integration, Enterprise content management, Enterprise Integration Patterns, Enterprise messaging system, EntireX, Fuse ESB, Fuse Message Broker, GNU Enterprise, Governance Interoperability Framework, Guarana DSL, Hoox, IgniteXML, IGrafX, Information silo, Integrated software, Integration Objects, ISIS Papyrus, JBoss Enterprise SOA Platform, Jitterbit Integration Server, Message-oriented middleware, Metaserver, Microsoft Enterprise Library, Openadaptor, OpenBRR, OpenGate...and much more This book explains in-depth the real drivers and workings of Web-Oriented Architecture. It reduces the risk of your technology, time and resources investment decisions by enabling you to compare your understanding of Web-Oriented Architecture with the objectivity of experienced professionals.

The 11th International Symposium on Distributed Computing and Artificial Intelligence 2014 (DCAI 2014) is a forum to present applications of innovative techniques for studying and solving complex problems. The exchange of ideas between scientists and technicians from both the academic and industrial sector is essential to facilitate the development of systems that can meet the ever-increasing demands of today's

society. The present edition brings together past experience, current work and promising future trends associated with distributed computing, artificial intelligence and their application in order to provide efficient solutions to real problems. This year's technical program presents both high quality and diversity, with contributions in well-established and evolving areas of research (Algeria, Brazil, China, Croatia, Czech Republic, Denmark, France, Germany, Ireland, Italy, Japan, Malaysia, Mexico, Poland, Portugal, Republic of Korea, Spain, Taiwan, Tunisia, Ukraine, United Kingdom), representing a truly "wide area network" of research activity. DCAI'14 Special Sessions have been a very useful tool in order to complement the regular program with new or emerging topics of particular interest to the participating community. Special Sessions that emphasize on multi-disciplinary and transversal aspects, such as AI-driven methods for Multimodal Networks and Processes Modeling and Multi-Agents Macroeconomics have been especially encouraged and welcome. This symposium is organized by the Bioinformatics, Intelligent System and Educational Technology Research Group (<http://bisite.usal.es/>) of the University of Salamanca. The present edition was held in Salamanca, Spain, from 4th to 6th June 2014.

The first volume of the POSA pattern series introduced a broad-spectrum of general-purpose patterns in software design and architecture. The second narrowed the focus to fundamental patterns for building sophisticated concurrent and networked software systems and applications. This volume uses design patterns to present techniques for implementing effective resource management in a system. The patterns are covered in detail making use of several examples providing directions to the readers on how to implement the presented patterns. Additionally, the volume presents a thorough introduction into resource management and a case study where the patterns are applied to the domain of mobile radio networks. The patterns are grouped by different areas of resource management and hence address the complete lifecycle of resources: resource acquisition, coordination and release.

The surge of interest in the REpresentational State Transfer (REST) architectural style, the Semantic Web and Linked Data has resulted in the development of innovative, flexible, and powerful systems that embrace one or more of these compatible technologies. Most developers, architects, Information Technology managers, and platform owners have only been exposed to the basics of these resource-oriented architectures however. This book is an attempt to catalog and elucidate several reusable solutions that have been seen in the wild in the now increasingly familiar "Patterns book" style. These are not turn key implementations, but rather useful strategies for solving certain problems in the development of modern, resource-oriented systems both on the public Web and within an organization's firewalls.

Intelligent Environments (IEs) aims to empower users by enriching their experience, raising their awareness and enhancing their management of their surroundings. The term IE is used to describe the physical spaces where ICT and pervasive technologies are used to achieve specific objectives for the user and/or the environment. The growing IE community, from academia and practitioners, is working on the materialization of IEs driven by the latest technological developments and innovative ideas. This book presents the proceedings of the workshops held in conjunction with the 16th International Conference on Intelligent Environments (IE2020), Madrid, Spain, 20-23 July 2020. The conference focused on the development of advance intelligent environments, as well as newly emerging and rapidly evolving topics. The workshops included here emphasize multi-disciplinary and transverse aspects of IE, as well as cutting-edge topics: 10th International Workshop on Intelligent Environments Supporting Healthcare and Well-being (WISHWell'20); 9th International Workshop on the Reliability of Intelligent Environments (WoRIE2020); 4th International Workshop on Legal Issues in Intelligent Environments (LIIE'20); 4th International Workshop on Intelligent Systems for Agriculture Production and Environment Protection (ISAPEP'20); 4th International Workshop on Citizen-Centric Smart Cities Services (CCSCS'20); 2nd International Workshop on Intelligent Environments and Buildings (IEB'20); 1st International Workshop on Research on Smart Grids and Related Applications (SGRA'20); 1st International Workshop on Open and Crowdsourced Location Data (ISOCLoD'20); 1st International Workshop on Social Media Analysis for Intelligent Environment (SMAIE'20). The proceedings contain contributions reflecting the latest research developments in IEs and related areas, focusing on stretching the borders of the current state of the art and contributing to an ever-increasing establishment of IEs in the real world. It will be of interest to all those whose work involves the design or application of Intelligent Environments.

"This book is a collection of widespread research providing relevant theoretical frameworks and research findings on the applications of distributed computing innovations to the business, engineering and science fields"--Provided by publisher.

Although industry has been leveraging the advancements of component-oriented development and assembly (CODA) technology for some time, there has long been a need for a book that provides a complete overview of the multiple technologies that support CODA. Filling this need, Component-Oriented Development and Assembly supplies comprehensive coverage of the principles, practice, and paradigm of component-oriented development and assembly. The first part of the book provides the conceptual foundation for component-oriented software. Part II focuses on the various standard Java component models and describes how to develop a component-oriented system using these component models. Part III covers the various aspects of the component-oriented development paradigm. Based on the authors' research and teaching experience, the text focuses on the principles of component-oriented software development from a technical concepts perspective, designer's perspective, programmer's perspective, and manager's perspective. Covering popular component development frameworks based on Java, it is suitable as a textbook for component-oriented software for undergraduate and postgraduate courses. It is also an ideal reference for anyone looking to adopt the component-oriented development paradigm. The book provides readers with access to all the source code used in the book on a companion site (<http://www.codabook.com>). The source code for the CODA implementation of the case study presented in Chapter 11 is also hosted on the website. The website will also serve as a technical forum for further discussions on the topic and for any updates to the book.

The application of proper ethical systems and education programs is a vital concern in the medical industry. When healthcare professionals are held to the highest moral and training standards, patient care is improved. Healthcare Ethics and Training: Concepts, Methodologies, Tools, and Applications is a comprehensive source of academic research material on methods and techniques for implementing ethical standards and effective education initiatives in clinical settings. Highlighting pivotal perspectives on topics such as e-health, organizational behavior, and patient rights, this multi-volume work is ideally designed for practitioners, upper-level students, professionals, researchers, and academics interested in the latest developments within the healthcare industry.

Takes a unique angle on Ajax, providing patterns for application development and best practices for integrating Ajax and REST into rich applications Designed to suit all groups of developers across many platforms, who are interested in the hot new topic of Ajax High demand for Ajax knowledge. Leading technology companies like Google and Yahoo are looking for developers with intimate knowledge of Ajax REST architecture (style) is a pivot of distributed systems, simplify data integration amongst modern and legacy applications leverages through the RESTful paradigm. This book is fully loaded with many RESTful API patterns, samples, hands-on implementations and also discuss the capabilities of many REST API frameworks for Java, Scala, Python and Go

In this truly unique technical book, today's leading software architects present valuable principles on key development issues that go way beyond technology. More than four dozen architects -- including Neal Ford, Michael Nygard, and Bill de hOra -- offer advice for communicating with stakeholders, eliminating complexity, empowering developers, and many more practical lessons they've learned from years of experience. Among the 97 principles in this book, you'll find useful advice such as: Don't Put Your Resume Ahead of the Requirements (Nitin Borwankar) Chances Are, Your Biggest Problem Isn't Technical (Mark Ramm) Communication Is King; Clarity and Leadership, Its Humble Servants (Mark Richards) Simplicity Before Generality, Use Before Reuse (Kevlin Henney) For the End User, the Interface Is the System (Vinayak Hegde) It's Never Too Early to Think About Performance (Rebecca Parsons) To be successful as a software

architect, you need to master both business and technology. This book tells you what top software architects think is important and how they approach a project. If you want to enhance your career, 97 Things Every Software Architect Should Know is essential reading.

This book constitutes revised papers from the eleven International Workshops held at the 15th International Conference on Business Process Management, BPM 2017, in Barcelona, Spain, in September 2017: BPAI 2017 – 1st International Workshop on Business Process Innovation with Artificial Intelligence; BPI 2017 – 13th International Workshop on Business Process Intelligence; BP-Meet-IoT 2017 – 1st International Workshop on Ubiquitous Business Processes Meeting Internet-of-Things; BPMS2 2017 – 10th Workshop on Social and Human Aspects of Business Process Management; ? CBPM 2017 – 1st International Workshop on Cognitive Business Process Management; CCABPM 2017 – 1st International Workshop on Cross-cutting Aspects of Business Process Modeling; DeHMiMoP 2017 – 5th International Workshop on Declarative/Decision/Hybrid Mining & Modeling for Business Processes; QD-PA 2017 – 1st International Workshop on Quality Data for Process Analytics; REBPM 2017 – 3rd International Workshop on Interrelations between Requirements Engineering and Business Process Management; SPBP 2017 – 1st Workshop on Security and Privacy-enhanced Business Process Management; TAProViz-PQ-IWPE 2017 – Joint International BPM 2017 Workshops on Theory and Application of Visualizations and Human-centric Aspects in Processes (TAProViz'17), Process Querying (PQ'17) and Process Engineering (IWPE17). The 44 full and 11 short papers presented in this volume were carefully reviewed and selected from 99 submissions.

As data management and integration continue to evolve rapidly, storing all your data in one place, such as a data warehouse, is no longer scalable. In the very near future, data will need to be distributed and available for several technological solutions. With this practical book, you'll learn how to migrate your enterprise from a complex and tightly coupled data landscape to a more flexible architecture ready for the modern world of data consumption. Executives, data architects, analytics teams, and compliance and governance staff will learn how to build a modern scalable data landscape using the Scaled Architecture, which you can introduce incrementally without a large upfront investment. Author Piethen Strengholt provides blueprints, principles, observations, best practices, and patterns to get you up to speed. Examine data management trends, including technological developments, regulatory requirements, and privacy concerns Go deep into the Scaled Architecture and learn how the pieces fit together Explore data governance and data security, master data management, self-service data marketplaces, and the importance of metadata

The book aims to provide a broad overview of various topics of the Internet of Things (IoT) from the research and development priorities to enabling technologies, architecture, security, privacy, interoperability and industrial applications. It is intended to be a stand-alone book in a series that covers the Internet of Things activities of the IERC - Internet of Things European Research Cluster - from technology to international cooperation and the global "state of play." The book builds on the ideas put forward by the European Research Cluster on the Internet of Things Strategic Research and Innovation Agenda and presents views and state of the art results on the challenges facing the research, development and deployment of IoT at the global level. Today we see the integration of Industrial, Business and Consumer Internet which is bringing together the Internet of People, Internet of Things, Internet of Energy, Internet of Vehicles, Internet of Media, Services and Enterprises in forming the backbone of the digital economy, the digital society and the foundation for the future knowledge and innovation based economy. These developments are supporting solutions for the emerging challenges of public health, aging population, environmental protection and climate change, the conservation of energy and scarce materials, enhancements to safety and security and the continuation and growth of economic prosperity. Penetration of smartphones and advances in nanoelectronics, cyber-physical systems, wireless communication, software, and Cloud computing technology will be the main drivers for IoT development. The IoT contribution is seen in the increased value of information created by the number of interconnections among things and the transformation of the processed information into knowledge shared into the Internet of Everything. The connected devices are part of ecosystems connecting people, processes, data, and things which are communicating in the Cloud using the increased storage and computing power while attempting to standardize communication and metadata. In this context, the next generation of Cloud computing technologies will need to be flexible enough to scale autonomously, adaptive enough to handle constantly changing connections and resilient enough to stand up to the huge flows of data that will occur. In 2025, analysts forecast that there will be six devices per human on the planet, which means around 50 billion more connected devices over the next 12 years. The Internet of Things market is connected to this anticipated device growth from industrial Machine to Machine (M2M) systems, smart meters and wireless sensors. Internet of Things technology will generate new services and new interfaces by creating smart environments and smart spaces with applications ranging from Smart Cities, Smart Transport, Buildings, Energy, Grid, to Smart Health and Life.

This book constitutes revised selected papers from the 15th International Conference on Web Information Systems and Technologies, WEBIST 20109 held in Vienna, Austria, in September 2019. The 10 full papers presented in this volume were carefully reviewed and selected from originally 87 paper submissions. They contribute to the understanding of relevant trends of current research on Web Information Systems and Technologies, including Big Data and Connected Services; Web Performance; Context-aware and Adaptive Web Applications; Human Robot Collaboration and Multi-Agent Systems; Web Application Operating Systems and Platforms; Social Media Advertising and Enhancing Purchase Intentions; Natural Language Query Interfaces and Semantic Web; and Human-computer Interaction and Dynamic Web Pages.

Service-oriented architecture (SOA) is a flexible set of design principles used during the phases of systems development and integration in computing. A system based on a SOA will package functionality as a suite of interoperable services that can be used within multiple, separate systems from several business domains. SOA also generally provides a way for consumers of services, such as web-based applications, to be aware of available SOA-based services. For example, several disparate departments within a company may develop and deploy SOA services in different implementation languages; their respective clients will benefit from a well understood, well defined interface to access them. XML is commonly used for interfacing with SOA services, though this is not required. This book is your ultimate resource for Service-oriented architecture (SOA). Here you will find the most up-to-date information, analysis, background and everything you need to know. In easy to read chapters, with extensive references and links to get you to know all there is to know about Service-oriented architecture (SOA) right away, covering: Service-oriented architecture, Apache ActiveMQ, Apache Camel, Apache Qpid, Apache ServiceMix, Apache Synapse, Apache Tuscany, Apatar, Application Response Measurement, Boot image control, Comparison of business integration software, Canonical Model, Communications-enabled application, Corticon, Data element, DataNucleus, E-Biz Integrator, Enterprise application integration, Enterprise content management, Enterprise Integration Patterns, Enterprise messaging system, Enterprise service bus, EntireX, Event-driven architecture, Event-driven SOA, FuseSource Corp., Fuse ESB, Fuse Message Broker, GNU Enterprise, Governance Interoperability Framework, Guarana DSL, Hoox, IgniteXML, IGrafx, Information silo, Integrated software, Integration Objects, ISIS Papyrus, JBoss Enterprise SOA Platform, Jitterbit Integration Server, Loose coupling, Message-oriented middleware, Metaserver, Microsoft Enterprise Library, Openadaptor, OpenBRR, OpenGate, Oracle Enterprise Service Bus, Oracle SOA Suite, Orchestration (computing), Pervasive business intelligence, Petals ESB, Sarvega, Search-based application, SEEBURGER, Semantic service-oriented architecture, Semantic translation, SEMCI, Service Component Architecture, Service Oriented Architecture Fundamentals, Service-oriented architecture implementation framework, SOALIB, Talend, ThoughtWorks, Total cost of ownership, Tryton, Universal integration platform, Verastream Host Integrator, Virtuoso Universal Server, Web-oriented architecture, WebORB Integration Server, While You Were Out (Cloud application), WS-CAF, Adaptive Services Grid, Application fabrication, B2B Gateway, Barracuda Networks, Boomerang Software Framework, Business

Process Network, Canonical Protocol Pattern, Canonical Schema pattern, Composite application, Denodo, Differentiated service, Digital Nervous System, Domain Inventory Pattern, Enterprise Inventory, Enterprise Service Layer, Entity Abstraction Pattern, Event-Driven Messaging, Experticity, Freightgate, Intel SOA Products Division, JackBe, Logic Centralization Pattern, Machine-to-Machine, Midas Kapiti, Multitenancy, Mushroom Networks, MVaaS, Net-Centric Enterprise Services, Network-Centric Service-Oriented Enterprise (NCSOE), OASIS SOA Reference Model, Open Knowledge Initiative, Open Mashup Alliance, Open Service Interface Definitions, Opti-Time Company, Oslo (Microsoft), Postini, Reliable messaging, S-RAMP, SAP Enterprise Architecture Framework, Service (systems architecture), Service Abstraction, Service Autonomy Principle...and much more This book explains in-depth the real drivers and workings of Service-oriented architecture (SOA). It reduces the risk of your technology, time and resources investment decisions by enabling you to compare your understanding of Service-oriented architecture (SOA) with the objectivity of experienced professionals.

This book constitutes the proceedings of the 16th International Conference on Business Process Management, BPM 2018, held in Sydney, Australia, in September 2018. The 27 papers presented in this volume were carefully reviewed and selected from 140 submissions. They were organized in topical sections named: reflections on BPM; concepts and methods in business process modeling and analysis; foundations of process discovery; alignments and conformance checking; process model analysis and machine learning; digital process innovation; and method analysis and selection.

This book explains how to combine and exploit sensor networks and internet-of-things (IoT) technologies and Web-service design patterns to enrich and integrate Building Information Models (BIMs). It provides approaches and software architectures for facilitating the interaction with (and between) BIMs through Web services, and for enabling and facilitating the fusion of the information residing in such models or of information acquired from IoT technologies. The proposed software architectures are presented in the form of design patterns. This information fusion will facilitate many novel application fields ranging from emergency response, to urban monitoring and surveillance, and to smart buildings. The book consists of 8 chapters. The first 2 chapters focus on the basics of BIMs, while chapter 3 presents fundamental service-oriented architecture patterns for complex information models. Subsequently, chapters 4 and 5 elaborate on the hardware and software side of IoT, with a special focus on their use for BIMs. Chapter 6 provides advanced SOA patterns for BIMs, while chapter 7 details patterns for IoT, and for BIM and IoT information fusion. Lastly, chapter 8 summarizes the work and provides an outlook on promising future developments. Overall, the book will be beneficial for researchers and developers in the fields of building information models, IoT applications, and systems integration.

Cloud Enterprise Architecture examines enterprise architecture (EA) in the context of the surging popularity of Cloud computing. It explains the different kinds of desired transformations the architectural blocks of EA undergo in light of this strategically significant convergence. Chapters cover each of the contributing architectures of EA—business, information, application, integration, security, and technology—illustrating the current and impending implications of the Cloud on each. Discussing the implications of the Cloud paradigm on EA, the book details the perceptible and positive changes that will affect EA design, governance, strategy, management, and sustenance. The author ties these topics together with chapters on Cloud integration and composition architecture. He also examines the Enterprise Cloud, Federated Clouds, and the vision to establish the InterCloud. Laying out a comprehensive strategy for planning and executing Cloud-inspired transformations, the book: Explains how the Cloud changes and affects enterprise architecture design, governance, strategy, management, and sustenance Presents helpful information on next-generation Cloud computing Describes additional architectural types such as enterprise-scale integration, security, management, and governance architectures This book is an ideal resource for enterprise architects, Cloud evangelists and enthusiasts, and Cloud application and service architects. Cloud center administrators, Cloud business executives, managers, and analysts will also find the book helpful and inspirational while formulating appropriate mechanisms and schemes for sound modernization and migration of traditional applications to Cloud infrastructures and platforms.

A look at the field of strategic management, exploring the theories of the running of the firm.

Medical and health activities can greatly benefit from the effective use of health informatics. By capturing, processing, and disseminating information to the correct systems and processes, decision-making can be more successful and quality care and patient safety would see significant improvements. The Handbook of Research on Patient Safety and Quality Care through Health Informatics highlights current research and trends from both professionals and researchers on health informatics as applied to the needs of patient safety and quality care. Bringing together theory and practical approaches for patient needs, this book is essential for educators and trainers at multiple experience levels in the fields of medicine and medical informatics.

Web browsing would not be what it is today without the use of Service-Oriented Architecture (SOA). Although much has been written about SOA methodology, this emerging platform is continuously under development. Exploring Enterprise Service Bus in the Service-Oriented Architecture Paradigm is a detailed reference source that examines current aspects and research methodologies that enable enterprise service bus to unify and connect services efficiently on a common platform. Featuring relevant topics such as SOA reference architecture, grid computing applications, complex event computing, and java business integration, this is an ideal resource for all practitioners, academicians, graduate students, and researchers interested in the discoveries on the relationship that Service-Oriented architecture and enterprise service bus share.

Over the past two decades, we have witnessed unprecedented innovations in the development of miniaturized electromechanical devices and low-power wireless communication making practical the embedding of networked computational devices into a rapidly widening range of material entities. This trend has enabled the coupling of physical objects and digital information into cyber-physical systems and it is widely expected to revolutionize the way resource computational consumption and provision will occur. Specifically, one of the core ingredients of this vision, the so-called Internet of Things (IoT), demands the provision of networked services to support interaction between conventional IT systems with both physical and artificial objects. In this way, IoT is seen as a combination of several emerging technologies, which enables the transformation of everyday objects into smart objects. It is also perceived as a paradigm that connects real world with digital world. The focus of this book is exactly on the novel collective and computational intelligence technologies that will be required to achieve this goal. While, one of the aims of this book is to discuss the progress made, it also prompts future directions on the utilization of inter-operable and cooperative next generation computational technologies, which supports the IoT approach, that being an advanced functioning towards an integrated collective intelligence approach for the benefit of various organizational settings.

Information systems development underwent many changes as systems transitioned onto web-based forums. Complemented by advancements in security and technology, internet-based systems have become an information mainstay. The Handbook of Research on Contemporary Perspectives on Web-Based Systems is a critical scholarly resource that examines relevant theoretical frameworks, current practice guidelines, industry standards, and the latest empirical research findings in web-based

systems. Featuring coverage on a wide range of topics such as data integration, mobile applications, and semantic web, this publication is geared toward computer engineers, IT specialists, software designers, professionals, researchers, and upper-level students seeking current and relevant research on the prevalence of these systems and advancements made to them.

Designing application and middleware software to run in concurrent and networked environments is a significant challenge to software developers. The patterns catalogued in this second volume of Pattern-Oriented Software Architectures (POSA) form the basis of a pattern language that addresses issues associated with concurrency and networking. The book presents 17 interrelated patterns ranging from idioms through architectural designs. They cover core elements of building concurrent and network systems: service access and configuration, event handling, synchronization, and concurrency. All patterns present extensive examples and known uses in multiple programming languages, including C++, C, and Java. The book can be used to tackle specific software development problems or read from cover to cover to provide a fundamental understanding of the best practices for constructing concurrent and networked applications and middleware. About the Authors This book has been written by the award winning team responsible for the first POSA volume "A System of Patterns", joined in this volume by Douglas C. Schmidt from University of California, Irvine (UCI), USA. Visit our Web Page

Advances in medical technology increase both the efficacy and efficiency of medical practice, and mobile technologies enable modern doctors and nurses to treat patients remotely from anywhere in the world. This technology raises issues of quality of care and medical ethics, which must be addressed. E-Health and Telemedicine: Concepts, Methodologies, Tools, and Applications explores recent advances in mobile medicine and how this technology impacts modern medical care. Three volumes of comprehensive coverage on crucial topics in wireless technologies for enhanced medical care make this multi-volume publication a critical reference source for doctors, nurse practitioners, hospital administrators, and researchers and academics in all areas of the medical field. This seminal publication features comprehensive chapters on all aspects of e-health and telemedicine, including implementation strategies; use cases in cardiology, infectious diseases, and cytology, among others; care of individuals with autism spectrum disorders; and medical image analysis.

Business and IT organizations are currently embracing new strategically sound concepts in order to be more customer-centric, competitive, and cognitive in their daily operations. While useful, the various software tools, pioneering technologies, as well as their unique contributions largely go unused due to the lack of information provided on their special characteristics. Novel Practices and Trends in Grid and Cloud Computing is a collection of innovative research on the key concerns of cloud computing and how they are being addressed, as well as the various technologies and tools empowering cloud theory to be participative, penetrative, pervasive, and persuasive. While highlighting topics including cyber security, smart technology, and artificial intelligence, this book is ideally designed for students, researchers, and business managers on the lookout for innovative IT solutions for all the business automation software and improvisations of computational technologies.

The Complete Book of Data Anonymization: From Planning to Implementation supplies a 360-degree view of data privacy protection using data anonymization. It examines data anonymization from both a practitioner's and a program sponsor's perspective. Discussing analysis, planning, setup, and governance, it illustrates the entire process of adapting and implementing anonymization tools and programs. Part I of the book begins by explaining what data anonymization is. It describes how to scope a data anonymization program as well as the challenges involved when planning for this initiative at an enterprisewide level. Part II describes the different solution patterns and techniques available for data anonymization. It explains how to select a pattern and technique and provides a phased approach towards data anonymization for an application. A cutting-edge guide to data anonymization implementation, this book delves far beyond data anonymization techniques to supply you with the wide-ranging perspective required to ensure comprehensive protection against misuse of data.

Build straightforward and maintainable APIs to create services that are usable and maintainable. Although this book focuses on distributed services, it also emphasizes how the core principles apply even to pure OOD and OOP constructs. The overall context of Creating Maintainable APIs is to classify the topics into four main areas: classes and interfaces, HTTP REST APIs, messaging APIs, and message payloads (XML, JSON and JSON API as well as Apache Avro). What You Will Learn Use object-oriented design constructs and their APIs Create and manage HTTP REST APIs Build and manage maintainable messaging APIs, including the use of Apache Kafka as a principal messaging hub Handle message payloads via JSON Who This Book Is For Any level software engineers and very experienced programmers. This book constitutes the refereed proceedings of the 12th European Conference on Software Architecture, ECSA 2018, held in Madrid, Spain, in September 2018. The 17 full papers presented together with 7 short papers were carefully reviewed and selected from 96 submissions. They are organized in topical sections as follows: Self-Adaptive Architectures, IoT Architectures, Embedded and Cyber-Physical Systems, Microservices Architectures, Service-Oriented Architectures, Architectural Design Decisions, Software Architecture in Practice.

This book gathers various perspectives on modern map production. Its primary focus is on the new paradigm of "sharing and reuse," which is based on decentralized, service-oriented access to spatial data sources. Service-Oriented Mapping is one of the main paradigms used to embed big data and distributed sources in modern map production, without the need to own the sources. To be stable and reliable, this architecture requires specific frameworks, tools and procedures. In addition to the technological structures, organizational aspects and geographic information system (GIS) capabilities provide powerful tools to make modern geoinformation management successful. Addressing a range of aspects, including the implementation of the semantic web in geoinformatics, using big data for geospatial visualization, standardization initiatives, and the European spatial data infrastructure, the book offers a comprehensive introduction to decentralized map production. .

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