

Benoît Garbinato
Hugo Miranda
Luís Rodrigues (Eds.)

Middleware

for Network Eccentric and
Mobile Applications



Springer

Middleware For Network Eccentric And Mobile Applications

Norbert Streit, Panos Markopoulos



Middleware For Network Eccentric And Mobile Applications:

Middleware for Network Eccentric and Mobile Applications Benoît Garbinato, Hugo Miranda, Luís Rodrigues, 2009-02-07 Middleware is a critical foundation needed to leverage the development of a wide range of mobile and ubiquitous applications. Intrinsic challenges when building such middleware require the combination of expertise from areas like distributed systems, networking, software engineering, and application development. This textbook provides a comprehensive introduction to the main fundamental problems, technologies, paradigms, and solutions of concern to developers of middleware for mobile environments. The contributions are grouped into four parts on networking and programming issues, communication models, middleware issues, and application issues. Each chapter is structured as a self-contained tutorial presenting an overview of a specific topic and the state of the art solutions for the related problems. In addition, the book also includes an authoritative reference list. The material has been successfully used in several thematic training schools organized by the ESF MiNEMA Middleware for Network Eccentric and Mobile Applications program, and the book's organization and presentation is ideal for an advanced course on middleware.

The Art of Wireless Sensor Networks Habib M. Ammari, 2013-12-13 During the last one and a half decades, wireless sensor networks have witnessed significant growth and tremendous development in both academia and industry. The Art of Wireless Sensor Networks Volume 1: Fundamentals focuses on the fundamental concepts in the design, analysis, and implementation of wireless sensor networks. It covers the various layers of the lifecycle of this type of network from the physical layer up to the application layer. Its rationale is that the first volume covers contemporary design issues, tools, and protocols for radio-based two-dimensional terrestrial sensor networks. All the book chapters in this volume include up-to-date research work spanning various classic facets of the physical properties and functional behavior of wireless sensor networks, including physical layer, medium access control, data routing, topology management, mobility management, localization, task management, data management, data gathering, security, middleware, sensor technology, standards, and operating systems. This book will be an excellent source of information for both senior undergraduate and graduate students majoring in computer science, computer engineering, electrical engineering, or any related discipline. In addition, computer scientists, researchers, and practitioners in both academia and industry will find this book useful and interesting.

Mobile Wireless Middleware, Operating Systems, and Applications Ying Cai, Thomas Magedanz, Minglu Li, Jinchun Xia, Carlo Giannelli, 2010-11-30 The advances in wireless communication technologies and the proliferation of mobile devices have enabled the realization of intelligent environments for people to communicate with each other, interact with information processing devices, and receive a wide range of mobile wireless services through various types of networks and systems everywhere, anytime. A key enabler of this pervasive and ubiquitous connectivity environment is the advancement of software technology in various communication sectors ranging from communication middleware and operating systems to networking protocols and applications. The international

conference series on Mobile Wireless Middleware Operating Systems and Applications MOBILWARE is dedicated to address emerging topics and challenges in various mobile wireless software related areas The scope of the conference includes the design implementation deployment and evaluation of middleware operating systems and applications for computing and communications in mobile wireless systems MOBILWARE 2010 was the third edition of this conference which was made possible thanks to the sponsorship of ICST and Create Net and most importantly the hard work of the TPC and reviewers Similar to the last successful editions we had 35 submissions from 23 different countries this year reflecting the international interest for the conference topics After a thorough review process we finalized an excellent technical program including 18 regular papers and 4 short papers

Principles and Applications of Distributed Event-Based Systems Hinze, Annika M.,Buchmann, Alejandro,2010-06-30 Principles and Applications of Distributed Event Based Systems showcases event based systems in real world applications Containing expert international contributions this advanced publication provides professionals researchers and students in systems design with a rich compendium of latest applications in the field

Big Data and Internet of Things: A Roadmap for Smart Environments Nik Bessis,Ciprian Dobre,2014-03-11 This book presents current progress on challenges related to Big Data management by focusing on the particular challenges associated with context aware data intensive applications and services The book is a state of the art reference discussing progress made as well as prompting future directions on the theories practices standards and strategies that are related to the emerging computational technologies and their association with supporting the Internet of Things advanced functioning for organizational settings including both business and e science Apart from inter operable and inter cooperative aspects the book deals with a notable opportunity namely the current trend in which a collectively shared and generated content is emerged from Internet end users Specifically the book presents advances on managing and exploiting the vast size of data generated from within the smart environment i e smart cities towards an integrated collective intelligence approach The book also presents methods and practices to improve large storage infrastructures in response to increasing demands of the data intensive applications The book contains 19 self contained chapters that were very carefully selected based on peer review by at least two expert and independent reviewers and is organized into the three sections reflecting the general themes of interest to the IoT and Big Data communities Section I Foundations and Principles Section II Advanced Models and Architectures Section III Advanced Applications and Future Trends The book is intended for researchers interested in joining interdisciplinary and transdisciplinary works in the areas of Smart Environments Internet of Things and various computational technologies for the purpose of an integrated collective computational intelligence approach into the Big Data era

Distributed, Ambient, and Pervasive Interactions Norbert Streitz,Panos Markopoulos,2015-07-21 This book constitutes the refereed proceedings of the Third International Conference on Distributed Ambient and Pervasive Interactions DAPI 2015 held as part of the 17th International Conference on Human Computer Interaction HCII 2015 held in

Los Angeles CA USA in August 2015 jointly with 15 other thematically conferences The total of 1462 papers and 246 posters presented at the HCII 2015 conferences were carefully reviewed and selected from 4843 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 addressing the following major topics designing and developing intelligent environments natural interaction design and development of distributed ambient and pervasive interactions smart devices objects and materials location motion and activity recognition smart cities and communities and humor in ambient intelligence

Mobile and Ubiquitous Systems: Computing, Networking and Services Arkady Zaslavsky,Zhaolong Ning,Vana Kalogeraki,Dimitrios Georgakopoulos,Panos K.

Chrysanthi,2024-07-18 These two volume proceedings constitute the refereed post conference proceedings of the 20th EAI International Conference on Mobile and Ubiquitous Systems Computing Networking and Services MobiQuitous 2023 held in Melbourne Australia during November 14 17 2023 The 65 papers presented in these proceedings were carefully reviewed and selected from 161 submissions The conference papers are organized in topical sections on Part I Tracking and Detection IoT Federated learning Networks Activity recognition Security Management Urban Mobile Crowdsensing Part II Urban Mobile Crowdsensing Edge computing Crowdsourcing Platforms and localization Activity recognition and prediction AI and machine learning Mobile edge and fog computing Mobile augmented reality and applications for mobile computing interaction technologies AutoQuitous workshop

Future Information Technology, Application, and Service James (Jong Hyuk) Park,Victor C.M. Leung,Cho-Li Wang,Taeshik Shon,2012-06-05 This book is proceedings of the 7th FTRA International Conference on Future Information Technology FutureTech 2012 The topics of FutureTech 2012 cover the current hot topics satisfying the world wide ever changing needs The FutureTech 2012 is intended to foster the dissemination of state of the art research in all future IT areas including their models services and novel applications associated with their utilization The FutureTech 2012 will provide an opportunity for academic and industry professionals to discuss the latest issues and progress in this area In addition the conference will publish high quality papers which are closely related to the various theories modeling and practical applications in many types of future technology The main scope of FutureTech 2012 is as follows Hybrid Information Technology Cloud and Cluster Computing Ubiquitous Networks and Wireless Communications Multimedia Convergence Intelligent and Pervasive Applications Security and Trust Computing IT Management and Service Bioinformatics and Bio Inspired Computing Database and Data Mining Knowledge System and Intelligent Agent Human centric Computing and Social Networks The FutureTech is a major forum for scientists engineers and practitioners throughout the world to present the latest research results ideas developments and applications in all areas of future technologies

Pervasive Computing and Networking Mohammad S. Obaidat,Mieso Denko,Isaac Woungang,2011-06-09

This book presents state of the art research on architectures algorithms protocols and applications in pervasive computing and networks With the widespread availability of wireless and mobile networking technologies and the expected convergence of ubiquitous computing with these emerging technologies in the near future pervasive computing and networking research and applications are among the hot topics on the agenda of researchers working on the next generation of mobile communications and networks This book provides a comprehensive guide to selected topics both ongoing and emerging in pervasive computing and networking It contains contributions from high profile researchers and is edited by leading experts in this field The main topics covered in the book include pervasive computing and systems pervasive networking security and pervasive networking and communication Key Features Discusses existing and emerging communications and computing models design architectures mobile and pervasive wireless applications technology and research challenges in pervasive computing systems networking and communications Provides detailed discussions of key research challenges and open research issues in the field of autonomic computing and networking Offers information on existing experimental studies including case studies implementation test beds in industry and academia Includes a set of PowerPoint slides for each chapter for instructors adopting it as a textbook Pervasive Computing and Networking will be an ideal reference for practitioners and researchers working in the areas of communication networking and pervasive computing and networking It also serves as an excellent textbook for graduate and senior undergraduate courses in computer science computer engineering electrical engineering software engineering and information engineering and science

Leveraging Applications of Formal Methods, Verification and Validation. Technologies for Mastering Change Tiziana Margaria, Bernhard Steffen, 2014-09-26 The two volume set LNCS 8802 and LNCS 8803 constitutes the refereed proceedings of the 6th International Symposium on Leveraging Applications of Formal Methods Verification and Validation ISoLA 2014 held in Imperial Corfu Greece in October 2014 The total of 67 full papers was carefully reviewed and selected for inclusion in the proceedings Featuring a track introduction to each section the papers are organized in topical sections named evolving critical systems rigorous engineering of autonomic ensembles automata learning formal methods and analysis in software product line engineering model based code generators and compilers engineering virtualized systems statistical model checking risk based testing medical cyber physical systems scientific workflows evaluation and reproducibility of program analysis processes and data integration in the networked healthcare semantic heterogeneity in the formal development of complex systems In addition part I contains a tutorial on automata learning in practice as well as the preliminary manifesto to the LNCS Transactions on the Foundations for Mastering Change with several position papers Part II contains information on the industrial track and the doctoral symposium and poster session

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