

Enabling Flexibility In Process Aware Information Systems Challenges Methods Technologies

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Information Systems Challenges Methods Technologies what you past to read!

Process Mining - Wil M. P. van der Aalst
2016-04-15

This is the second edition of Wil van der Aalst's seminal book on process mining, which now discusses the field also in the broader context of data science and big data approaches. It includes several additions and updates, e.g. on inductive mining techniques, the notion of alignments, a considerably expanded section on software tools and a completely new chapter of process mining in the large. It is self-contained, while at the same time covering the entire process-mining spectrum from process discovery to predictive analytics. After a general introduction to data science and process mining in Part I, Part II provides the basics of business process modeling and data mining necessary to understand the remainder of the book. Next, Part III focuses on process discovery as the most

important process mining task, while Part IV moves beyond discovering the control flow of processes, highlighting conformance checking, and organizational and time perspectives. Part V offers a guide to successfully applying process mining in practice, including an introduction to the widely used open-source tool ProM and several commercial products. Lastly, Part VI takes a step back, reflecting on the material presented and the key open challenges. Overall, this book provides a comprehensive overview of the state of the art in process mining. It is intended for business process analysts, business consultants, process managers, graduate students, and BPM researchers.

Web Information Systems and Technologies

- Valérie Monfort 2015-12-15

This book constitutes revised selected papers from the 10th International Conference on Web

Information Systems and Technologies, WEBIST 2014, held in Barcelona, Spain, April 2014, organized by the Institute for Systems and Technologies of Information, Control and Communication (INSTICC), and technically sponsored by the European Research Center for Information Systems (ERCIS). The purpose of the WEBIST series of conferences is to bring together researchers, engineers and practitioners interested in technological advances and business applications of web-based information systems. The 21 papers presented in this volume were carefully reviewed and selected originally 153 paper submissions. They were organized in topical sections names, internet technology; web interfaces and applications; society, e-business and e-government; web intelligence; and mobile information systems. The book also contains two invited talks in full-paper length.

The Essence of Software Engineering -

Volker Gruhn 2018-06-13

This open access book includes contributions by

leading researchers and industry thought leaders on various topics related to the essence of software engineering and their application in industrial projects. It offers a broad overview of research findings dealing with current practical software engineering issues and also pointers to potential future developments. Celebrating the 20th anniversary of adesso AG, adesso gathered some of the pioneers of software engineering including Manfred Broy, Ivar Jacobson and Carlo Ghezzi at a special symposium, where they presented their thoughts about latest software engineering research and which are part of this book. This way it offers readers a concise overview of the essence of software engineering, providing valuable insights into the latest methodological research findings and adesso's experience applying these results in real-world projects.

Business Process Management - Akhil Kumar

2018-02-02

This book introduces students to business

process management, an approach that aims to align the organization's business processes with the demands of the marketplace. Processes serve as a coordination mechanism, and the aim of business process management is to improve the organization's effectiveness and efficiency in adapting to change, and maintaining competitive advantage. In Business Process Management, Kumar argues for the value of looking at businesses as a collection of processes that cut across departments, and for breaking down functional silos. The book provides an overview of the basic concepts in this field before moving on to more advanced topics such as process verification, flexible processes, process security and evaluation, resource assignment, and social networks. The book concludes with an examination of the future directions of the discipline. Blending a strong grounding in current research with a focus on concepts and tools, Business Process Management is an accessible textbook full of practical examples

and cases that will appeal to upper level students.

Process-Aware Information Systems - Marlon Dumas 2005-10-27

A unifying foundation to design and implement process-aware information systems This publication takes on the formidable task of establishing a unifying foundation and set of common underlying principles to effectively model, design, and implement process-aware information systems. Authored by leading authorities and pioneers in the field, Process-Aware Information Systems helps readers gain a thorough understanding of major concepts, languages, and techniques for building process-aware applications, including: * UML and EPCs: two of the most widely used notations for business process modeling * Concrete techniques for process design and analysis * Process execution standards: WfMC and BPEL * Representative commercial tools: ARIS, TIBCO Staffware, and FLOWer Each chapter begins with

a description of the problem domain and then progressively unveils relevant concepts and techniques. Examples and illustrations are used extensively to clarify and simplify complex material. Each chapter ends with a set of exercises, ranging from simple questions to thought-provoking assignments. Sample solutions for many of the exercises are available on the companion Web site. Armed with a new and deeper understanding, readers are better positioned to make their own contributions to the field and evaluate various approaches to a particular task or problem. This publication is recommended as a textbook for graduate and advanced undergraduate students in computer science and information systems, as well as for professionals involved in workflow and business process management, groupware and teamwork, enterprise application integration, and business-to-business integration. A Solution's Manual is available online. An Instructor Support FTP site is also available.

Business Process Management Workshops -

Marcello La Rosa 2013-01-26

This book constitutes the refereed proceedings of 12 international workshops held in Tallinn, Estonia, in conjunction with the 10th International Conference on Business Process Management, BPM 2012, in September 2012. The 12 workshops comprised Adaptive Case Management and Other Non-Workflow Approaches to BPM (ACM 2012), Business Process Design (BPD 2012), Business Process Intelligence (BPI 2012), Business Process Management and Social Software (BPMS2 2012), Data- and Artifact-Centric BPM (DAB 2012), Event-Driven Business Process Management (edBPM 2012), Empirical Research in Business Process Management (ER-BPM 2012), Process Model Collections (PMC 2012), Process-Aware Logistics Systems (PALS 2012), Reuse in Business Process Management (rBPM 2012), Security in Business Processes (SBP 2012), and Theory and Applications of Process

Visualization (TAProViz 2012). The 56 revised full papers presented were carefully reviewed and selected from 141 submissions.

Future Data and Security Engineering - Tran Khanh Dang 2020-11-19

This book constitutes the proceedings of the 7th International Conference on Future Data and Security Engineering, FDSE 2020, which was supposed to be held in Quy Nhon, Vietnam, in November 2020, but the conference was held virtually due to the COVID-19 pandemic. The 24 full papers (of 53 accepted full papers) presented together with 2 invited keynotes were carefully reviewed and selected from 161 submissions. The other 29 accepted full and 8 short papers are included in CCIS 1306. The selected papers are organized into the following topical headings: security issues in big data; big data analytics and distributed systems; advances in big data query processing and optimization; blockchain and applications; industry 4.0 and smart city: data analytics and security; advanced

studies in machine learning for security; and emerging data management systems and applications.

Enterprise Interoperability - Marten van Sinderen 2013-03-22

This book constitutes the proceedings of the 5th International IFIP Working Conference on Enterprise Interoperability (IWEI 2013), held in Enschede, The Netherlands, during March 27-28, 2013. The theme for IWEI 2013 was "Information Services and Processes for the Interoperable Economy and Society." The 15 full papers presented in this volume were carefully selected from 35 submissions. The selection was based on a thorough review process, in which each paper was reviewed by at least three experts in the field. The papers are representative of the current research activities in the area of enterprise interoperability and are grouped into six sections: enterprise service interoperability, enterprise interoperability in sectors, interoperability methodology,

interoperability for specific application types, strategic and tactical aspects of enterprise interoperability, and ontology-based interoperability. Two keynotes and an invited paper complete this volume.

Information Systems for Crisis Response and Management in Mediterranean Countries

- Paloma Díaz 2016-10-18

This book constitutes the refereed proceedings of the Third International Conference on Information Systems for Crisis Response and Management in Mediterranean Countries, ISCRAM-med 2016, held in Madrid, Spain, in October 2016. Information systems and technologies can play a key role in crisis management in order to support preparation, response, mitigation and recovery processes. Yet technology is not enough to guarantee a better management process, and therefore the conference does not only focus on engineering technologies, but also on their application and practical experiences. The 12 full and 8 short

papers presented in this volume were carefully reviewed and selected from 36 submissions. They are organized in topical sections on mobile apps for citizens, modeling and simulation, development of information systems, information and knowledge management, collaboration and coordination, social computing, and issues in humanitarian crisis.

Conceptual Modeling Perspectives

- Jordi Cabot 2017-10-12

Conceptual modeling has always been one of the main issues in information systems engineering as it aims to describe the general knowledge of the system at an abstract level that facilitates user understanding and software development. This collection of selected papers provides a comprehensive and extremely readable overview of what conceptual modeling is and perspectives on making it more and more relevant in our society. It covers topics like modeling the human genome, blockchain technology, model-driven software development, data integration, and

wiki-like repositories and demonstrates the general applicability of conceptual modeling to various problems in diverse domains. Overall, this book is a source of inspiration for everybody in academia working on the vision of creating a strong, fruitful and creative community of conceptual modelers. With this book the editors and authors want to honor Prof. Antoni Olivé for his enormous and ongoing contributions to the conceptual modeling discipline. It was presented to him on the occasion of his keynote at ER 2017 in Valencia, a conference that he has contributed to and supported for over 20 years. Thank you very much to Antoni for so many years of cooperation and friendship.

Business Modeling and Software Design -

Boris Shishkov 2022-08-31

This book constitutes the refereed proceedings of the 12h International Symposium on Business Modeling and Software Design, BMSD 2022, which took place in Fribourg, Switzerland, in June 2022. The 12 full and 9 short papers

included in this book were carefully reviewed and selected from a total of 56 submissions. BMSD is a leading international forum that brings together researchers and practitioners interested in business modeling and its relation to software design. Particular areas of interest are: Business Processes and Enterprise Engineering; Business Models and Requirements; Business Models and Services; Business Models and Software; Information Systems Architectures and Paradigms; Data Aspects in Business Modeling and Software Development; Blockchain-Based Business Models and Information Systems; IoT and Implications for Enterprise Information Systems. Each year, a special theme is chosen, for making presentations and discussions more focused. The BMSD 2022 theme is: Information Systems Engineering and Trust.

S-BPM ONE - Education and Industrial Developments - Stefan Oppl 2012-03-27

This book constitutes the thoroughly refereed

proceedings of the industrial track of the 4th International Conference on Subject-Oriented Business Process Management, S-BPM ONE 2012, held in Vienna, Austria, in April 2012. S-BPM as a discipline is characterized by a seamless approach toward the analysis, modeling, implementation, execution, and maintenance of business processes, with an explicit stakeholder focus. The 19 papers included were selected from the practically oriented submissions, and they have gone through the same rigorous peer-review process as their scientific counterparts.

Perspectives in Business Informatics Research - Raimundas Matulevičius 2015-08-17

This book constitutes the proceedings of the 14th International Conference on Perspectives in Business Informatics Research, BIR 2015, held in Tartu, Estonia, in August 2015. Overall, 49 submissions from 16 countries were rigorously reviewed by 47 members of the Program Committee representing 23 countries. The

selected 16 full papers and 4 short papers are included in this volume. The conference theme was "making business information systems interoperable and adaptive in highly interconnected and changing contexts". The papers have been organized in topical sections on business information systems interoperability, business information system requirements and architecture, business process and decision management, business information systems development, and research in progress. Enabling Flexibility in Process-Aware Information Systems - Manfred Reichert 2014-09-20

In today's dynamic business world, the success of a company increasingly depends on its ability to react to changes in its environment in a quick and flexible way. Companies have therefore identified process agility as a competitive advantage to address business trends like increasing product and service variability or faster time to market, and to ensure business IT

alignment. Along this trend, a new generation of information systems has emerged—so-called process-aware information systems (PAIS), like workflow management systems, case handling tools, and service orchestration engines. With this book, Reichert and Weber address these flexibility needs and provide an overview of PAIS with a strong focus on methods and technologies fostering flexibility for all phases of the process lifecycle (i.e., modeling, configuration, execution and evolution). Their presentation is divided into six parts. Part I starts with an introduction of fundamental PAIS concepts and establishes the context of process flexibility in the light of practical scenarios. Part II focuses on flexibility support for pre-specified processes, the currently predominant paradigm in the field of business process management (BPM). Part III details flexibility support for loosely specified processes, which only partially specify the process model at build-time, while decisions regarding the exact specification of certain

model parts are deferred to the run-time. Part IV deals with user- and data-driven processes, which aim at a tight integration of processes and data, and hence enable an increased flexibility compared to traditional PAIS. Part V introduces existing technologies and systems for the realization of a flexible PAIS. Finally, Part VI summarizes the main ideas of this book and gives an outlook on advanced flexibility issues. The book's target groups include researchers, PhD students and Master students in the field of information systems. After reading the book, they will better understand PAIS flexibility aspects. To support the easy use as a textbook, a series of exercises is provided at the end of each chapter and slides and further teaching material are available on the book's web site www.flexible-processes.com. Professionals specializing in business process management (BPM) who want to obtain a good understanding of flexibility challenges in BPM and state-of-the-art solutions will also benefit from the

presentations of open source as well as commercial process management systems and related practical scenarios.

Enabling Flexibility in Process-Aware Information Systems - Manfred Reichert

2012-08-28

In today's dynamic business world, the success of a company increasingly depends on its ability to react to changes in its environment in a quick and flexible way. Companies have therefore identified process agility as a competitive advantage to address business trends like increasing product and service variability or faster time to market, and to ensure business IT alignment. Along this trend, a new generation of information systems has emerged—so-called process-aware information systems (PAIS), like workflow management systems, case handling tools, and service orchestration engines. With this book, Reichert and Weber address these flexibility needs and provide an overview of PAIS with a strong focus on methods and technologies

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Enterprise, Business-Process and Information Systems Modeling - Iris

Reinhartz-Berger 2017-06-01

This book constitutes the proceedings of two events held in conjunction with the CAiSE

conferences and related to the areas of enterprise, business-process and information systems modeling: the 18th International Conference on Business Process Modeling, Development and Support, BPMDS 2017, and the 22nd International Conference on Evaluation and Modeling Methods for Systems Analysis and Development, EMMSAD, 2017. They took place in Essen, Germany, in June 2017. The focus theme for BPMDS 2017 papers was "Enabling Business Transformation by Business Process Modeling, Development and Support". From 24 submitted papers, 11 were finally accepted and organized by: Non-functional considerations in business processes; new challenges in business process modeling and support; testing business processes; business process model comprehension; an experience report on teaching business process modeling. The EMMSAD conference focuses on evaluating, exploring and enhancing modeling methods and techniques for the development of information

and software systems, enterprises, and business processes. It received 25 submissions, from which 9 full and 2 short papers were selected and organized: evaluation and comparison of modeling languages and methods; modeling approaches to support decision making; behavioral specification and business process modeling; and modeling languages and methods in evolving context.

Decision Support Systems VII. Data, Information and Knowledge Visualization in Decision Support Systems - Isabelle Linden 2017-05-18

This book constitutes the proceedings of the Third International Conference on Decision Support Systems, ICDSST 2017, held in Namur, Belgium, in May 2017. The EWG-DSS series of the International Conference on Decision Support System Technology (ICDSST) offers a platform for European and international DSS communities, comprising the academic and industrial sectors, in order to present state-of-the-art DSS research and developments, to

discuss current challenges that surround decision-making processes, to exchange ideas about realistic and innovative solutions, and to co-develop potential business opportunities. The main topic of this year's conference was "Data, Information and Knowledge Visualization in Decision Making". The 13 papers presented in this volume were carefully reviewed and selected from 53 submissions. They were organized in topical sections named: visualization case studies; visualization perspectives; analytics and decision; and Multi-Criteria Decision Making.

Enterprise, Business-Process and Information Systems Modeling - Khaled Gaaloul 2015-05-26

This book contains the refereed proceedings of the 16th International Conference on Business Process Modeling, Development and Support, BPMDS 2015, and the 20th International Conference on Exploring Modeling Methods for Systems Analysis and Design, EMMSAD 2015,

held together with the 27th International Conference on Advanced Information Systems Engineering (CAiSE 2015) in Stockholm, Sweden, in June 2015. The 17 full papers accepted for BPMDS were selected from 43 submissions and cover a wide spectrum of issues related to business process development, modeling, and support. They are grouped into topical sections on enabling value creation, human-centric paradigms, mining for processes, declarative approaches, understanding and sharing, quality and security issues, and new areas for BPMDS. The 12 full and three short papers accepted for EMMSAD were chosen from 33 submissions and focus on exploring, evaluating, and enhancing modeling methods and methodologies for the analysis and design of information systems, enterprises, and business processes. They are grouped into topical sections on fundamental issues in modeling, requirements and regulations, enterprise and software ecosystem modeling, information and

process model quality, meta-modeling and domain-specific modeling and model composition, modeling of architecture and design, and novel applications of modeling.

Business Information Systems Workshops -
Witold Abramowicz 2014-09-30

This book constitutes the refereed proceedings of the five workshops that were organized in conjunction with the International Conference on Business Information Systems, BIS 2014, which took place in Larnaca, Cyprus, in May 2014. The 27 papers in this volume were carefully reviewed and selected from 53 submissions and were revised and extended after the event. The workshop topics covered applications and economics of knowledge-based technologies (AKTB), business and IT alignment (BITA), digital currencies (DC), modern applications of business information systems (MODAPP), and tools for setting up and running a business in cloud computing (TSRB). In addition a keynote paper is included in this book.

Service-Driven Approaches to Architecture and Enterprise Integration - Ramanathan,

Raja 2013-06-30

While business functions such as manufacturing, operations, and marketing often utilize various software applications, they tend to operate without the ability to interact with each other and exchange data. This provides a challenge to gain an enterprise-wide view of a business and to assist real-time decision making. Service-Driven Approaches to Architecture and Enterprise Integration addresses the issues of integrating assorted software applications and systems by using a service driven approach. Supporting the dynamics of business needs, this book highlights the tools, techniques, and governance aspects of design, and implements cost-effective enterprise integration solutions. It is a valuable source of information for software architects, SOA practitioners, and software engineers as well as researchers and students in pursuit of extensible and agile software design.

Process Querying Methods - Artem

Polyvyanyy 2022-05-27

This book presents a framework for developing as well as a comprehensive collection of state-of-the-art process querying methods. Process querying combines concepts from Big Data and Process Modeling and Analysis with Business Process Intelligence and Process Analytics to study techniques for retrieving and manipulating models of real-world and envisioned processes to organize and extract process-related information for subsequent systematic use. The book comprises sixteen contributed chapters distributed over four parts and two auxiliary chapters. The auxiliary chapters by the editor provide an introduction to the area of process querying and a summary of the presented methods, techniques, and applications for process querying. The introductory chapter also examines a process querying framework. The contributed chapters present various process querying methods, including discussions on how

they instantiate the framework components, thus supporting the comparison of the methods. The four parts are due to the distinctive features of the methods they include. The first three are devoted to querying event logs generated by IT-systems that support business processes at organizations, querying process designs captured in process models, and methods that address querying both event logs and process models. The methods in these three parts usually define a language for specifying process queries. The fourth part discusses methods that operate over inputs other than event logs and process models, e.g., streams of process events, or do not develop dedicated languages for specifying queries, e.g., methods for assessing process model similarity. This book is mainly intended for researchers. All the chapters in this book are contributed by active researchers in the research disciplines of business process management, process mining, and process querying. They describe state-of-the-art methods

for process querying, discuss use cases of process querying, and suggest directions for future work for advancing the field. Yet, also other groups like business or data scientists and other professionals, lecturers, graduate students, and tool vendors will find relevant information for their distinctive needs. Chapter "Celonis PQL: A Query Language for Process Mining" is available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.

[Seminal Contributions to Information Systems Engineering](#) - Janis Bubenko 2013-06-13

In 2013, the International Conference on Advance Information Systems Engineering (CAiSE) turns 25. Initially launched in 1989, for all these years the conference has provided a broad forum for researchers working in the area of Information Systems Engineering. To reflect on the work done so far and to examine prospects for future work, the CAiSE Steering Committee decided to present a selection of

seminal papers published for the conference during these years and to ask their authors, all prominent researchers in the field, to comment on their work and how it has developed over the years. The scope of the papers selected covers a broad range of topics related to modeling and designing information systems, collecting and managing requirements, and with special attention to how information systems are engineered towards their final development and deployment as software components. With this approach, the book provides not only a historical analysis on how information systems engineering evolved over the years, but also a fascinating social network analysis of the research community. Additionally, many inspiring ideas for future research and new perspectives in this area are sparked by the intriguing comments of the renowned authors.

E-Business and Telecommunications -

Mohammad S. Obaidat 2017-10-26

This book constitutes the refereed proceedings

of the 13th International Joint Conference on E-Business and Telecommunications, ICETE 2016, held in Lisbon, Portugal, in July 2016. ICETE is a joint international conference integrating four major areas of knowledge that are divided into six corresponding conferences: International Conference on Data Communication Networking, DCNET; International Conference on E-Business, ICE-B; International Conference on Optical Communication Systems, OPTICS; International Conference on Security and Cryptography, SECRIPT; International Conference on Signal Processing and Multimedia, SIGMAP; International Conference on Wireless Information Systems, WINSYS. The 20 full papers presented together with an invited paper in this volume were carefully reviewed and selected from 241 submissions. The papers cover the following key areas of e-business and telecommunications: data communication networking; e-business; optical communication systems; security and cryptography; signal

processing and multimedia applications; wireless networks and mobile systems.

Web Information Systems and Applications - Chunxiao Xing 2021-09-16

This book constitutes the proceedings of the 18th International Conference on Web Information Systems and Applications, WISA 2021, held in Kaifeng, China, in September 2021. The 49 full papers and 18 short papers presented were carefully reviewed and selected from 206 submissions. The papers are grouped in topical sections on world wide web, query processing and algorithm, natural language processing, machine learning, data mining, data privacy and security.

Transactions on Petri Nets and Other Models of Concurrency II - Wil M. P. van der Aalst 2009-03-26

Transactions on Petri Nets and Other Models of Concurrency (ToPNoC) II These Transactions publish archival papers in the broad area of Petri nets and other models of concurrency, ranging

from theoretical work to tool support and industrial applications. ToPNoC issues are published as LNCS volumes, and hence are widely distributed and indexed. This Journal has its own Editorial Board which selects papers based on a rigorous two-stage refereeing process. ToPNoC contains: - Revised versions of a selection of the best papers from workshops and tutorials at the annual Petri net conferences - Special sections/issues within particular subareas (similar to those published in the Advances in Petri Nets series) - Other papers invited for publication in ToPNoC - Papers submitted directly to ToPNoC by their authors The second volume of ToPNoC focuses on Concurrency in Process-Aware Information Systems. Although the topic of business process management using information technology has been addressed by consultants and software developers in depth, more fundamental approaches towards such Process-Aware Information Systems (PAISs) have been rather

uncommon. It wasn't until the 1990s that researchers started to work on the foundations of PAISs. Clearly, concurrency theory is an essential ingredient in these foundations as business processes are highly concurrent involving all types of routing logic and resource allocation mechanisms. The 16 papers in this special issue of ToPNoC cover topics ranging from the formal (mostly Petri-net based) foundations of PAISs to more applied topics such as flexibility and process mining. Thus, this volume gives a good overview of the state of the art in PAIS research.

On the Move to Meaningful Internet

Systems: OTM 2016 Conferences - Christophe Debruyne 2016-10-17

This volume constitutes the refereed proceedings of the Confederated International Conferences: Cooperative Information Systems, CoopIS 2016, Ontologies, Databases, and Applications of Semantics, ODBASE 2016, and Cloud and Trusted Computing, C&TC, held as

part of OTM 2016 in October 2016 in Rhodes, Greece. The 45 full papers presented together with 16 short papers were carefully reviewed and selected from 133 submissions. The OTM program every year covers data and Web semantics, distributed objects, Web services, databases, information systems, enterprise workow and collaboration, ubiquity, interoperability, mobility, grid and high-performance computing.

Business Process Management Workshops - Fabiana Fournier 2015-04-11

This book constitutes the refereed proceedings of ten international workshops held in Eindhoven, The Netherlands, in conjunction with the 12th International Conference on Business Process Management, BPM 2014, in September 2014. The ten workshops comprised Process-oriented Information Systems in Healthcare (ProHealth 2014), Security in Business Processes (SBP 2014), Process Model Collections: Management and Reuse (PMC-MR

2014), Business Processes in Collective Adaptive Systems (BPCAS 2014), Data- and Artifact-centric BPM (DAB 2014), Business Process Intelligence (BPI 2014), Business Process Management in the Cloud (BPMC 2014), Theory and Applications of Process Visualization (TaProViz 2014), Business Process Management and Social Software (BPMS2 2014) and Decision Mining and Modeling for Business Processes (DeMiMoP 2014). The 38 revised full and eight short papers presented were carefully reviewed and selected from 84 submissions. In addition, six short papers resulting from the Doctoral Consortium at BPM 2014 are included in this book.

Enterprise, Business-Process and Information Systems Modeling - Rainer Schmidt 2016-06-06
This book contains the refereed proceedings of the 17th International Conference on Business Process Modeling, Development and Support, BPMDS 2016, and the 21st International Conference on Exploring Modeling Methods for

Systems Analysis and Design, EMMSAD 2016, held together with the 28th International Conference on Advanced Information Systems Engineering (CAiSE 2016) in Ljubljana, Slovenia, in June 2016. The focus theme for BPMDS 2016 papers was "Business Processes in a Connected World", for which three subthemes were identified: business processes for connecting people, connecting intelligent objects to business processes and connecting information/data/knowledge to business processes. The 17 full and 1 short paper accepted for BPMDS were selected from 48 submissions and are grouped into topical sections on process execution support; improving usability of process models; social and human perspectives; new directions in process modeling; consistency, correctness and compliance; process and data mining; and process variability. The intention of EMMSAD is to solicit papers related to the field of information systems analysis and design

including numerous information modeling methods and notations that are typically evolving. These ongoing changes significantly impact the way information systems, enterprises, and business processes are being analyzed and designed in practice. The 12 full papers accepted for EMMSAD were chosen from 19 submissions and are grouped into topical sections on fundamental issues in modeling; requirements and regulations; enterprise and software ecosystem modeling; information and process model quality; meta-modeling and domain specific modeling and model composition; and modeling of architecture and design.

Workflow Patterns - Nick Russell 2016-02-26
A comprehensive guide to well-known workflow patterns: recurrent, generic business process constructs, described from the control-flow, data, and resource perspectives. The study of business processes has emerged as a highly effective approach to coordinating an

organization's complex service- and knowledge-based activities. The growing field of business process management (BPM) focuses on methods and tools for designing, enacting, and analyzing business processes. This volume offers a definitive guide to the use of patterns, which synthesize the wide range of approaches to modeling business processes. It provides a unique and comprehensive introduction to the well-known workflow patterns collection—recurrent, generic constructs describing common business process modeling and execution scenarios, presented in the form of problem-solution dialectics. The underlying principles of the patterns approach ensure that they are independent of any specific enabling technology, representational formalism, or modeling approach, and thus broadly applicable across the business process modeling and business process technology domains. The authors, drawing on extensive research done by the Workflow Patterns Initiative, offer a detailed

introduction to the fundamentals of business process modeling and management; describe three major pattern catalogs, presented from control-flow, data, and resource perspectives; and survey related BPM patterns. The book, a companion to the authoritative Workflow Patterns website, will be an essential resource for both academics and practitioners working in business process modeling and business process management.

Enterprise, Business-Process and Information Systems Modeling - Selmin Nurcan 2013-06-20

This book contains the refereed proceedings of the 14th International Conference on Business Process Modeling, Development and Support (BPMDs 2013) and the 18th International Conference on Exploring Modeling Methods for Systems Analysis and Design (EMMSAD 2013), held together with the 25th International Conference on Advanced Information Systems Engineering (CAiSE 2013) in Valencia, Spain, in

June 2013. The 15 full papers, two experience reports, and three idea papers accepted for BPMDs were selected from 54 submissions and cover a wide spectrum of issues related to business process development, modeling, and support. They are grouped into sections on innovative representations for knowledge-intensive processes; business process management in practice; analysis of business process models; model-based business process analysis; flexible business process management; improvement and change patterns; and process model repositories. The 10 full and 2 short papers accepted for EMMSAD were chosen from 27 submissions and focus on exploring, evaluating, and enhancing current information modeling methods and methodologies. They are grouped in sections on advanced modelling; capturing design knowledge; method engineering; modelling process; specialized modelling; and modelling experiences. [Process Modeling and Management for](#)

Healthcare - Carlo Combi 2017-11-09

From the Foreword: "[This book] provides a comprehensive overview of the fundamental concepts in healthcare process management as well as some advanced topics in the cutting-edge research of the closely related areas. This book is ideal for graduate students and practitioners who want to build the foundations and develop novel contributions in healthcare process modeling and management." --Christopher Yang, Drexel University Process modeling and process management are traversal disciplines which have earned more and more relevance over the last two decades. Several research areas are involved within these disciplines, including database systems, database management, information systems, ERP, operations research, formal languages, and logic. Process Modeling and Management for Healthcare provides the reader with an in-depth analysis of what process modeling and process management techniques can do in healthcare, the major challenges faced,

and those challenges remaining to be faced. The book features contributions from leading authors in the field. The book is structured into two parts. Part one covers fundamentals and basic concepts in healthcare. It explores the architecture of a process management environment, the flexibility of a process model, and the compliance of a process model. It also features a real application domain of patients suffering from age-related macular degeneration. Part two of the book includes advanced topics from the leading frontiers of scientific research on process management and healthcare. This section of the book covers software metrics to measure features of the process model as a software artifact. It includes process analysis to discover the formal properties of the process model prior to deploying it in real application domains. Abnormal situations and exceptions, as well as temporal clinical guidelines, are also presented in depth Pro.

Information Systems in the Big Data Era - Jan Mendling 2018-06-06

This book constitutes the thoroughly refereed proceedings of the CAiSE Forum 2018 held in Tallinn, Estonia, as part of the 30th International Conference on Advanced Information Systems Engineering, CAiSE 2018, in June 2018. The CAiSE Forum is a place within the CAiSE conference for presenting and discussing new ideas and tools related to information systems engineering. Intended to serve as an interactive platform, the Forum aims at the presentation of emerging new topics and controversial positions, as well as demonstration of innovative systems, tools and applications. This year's theme was "Information Systems in the Big Data Era". The 10 full and 12 short papers in this volume were carefully reviewed and selected from 17 direct submissions (of which 2 full and 7 short papers were selected), plus 13 transfers from the CAiSE main conference (which resulted in another 8 full and 5 short papers).

Business Process Management Workshops - Manfred Reichert 2016-07-25

This book constitutes the refereed proceedings of ten international workshops held in Innsbruck, Austria, in conjunction with the 13th International Conference on Business Process Management, BPM 2015, in September 2015. The seven workshops comprised Adaptive Case Management and other Non-workflow Approaches to BPM (AdaptiveCM 2015), Business Process Intelligence (BPI 2015), Social and Human Aspects of Business Process Management (BPMS2 2015), Data- and Artifact-centric BPM (DAB 2015), Decision Mining and Modeling for Business Processes (DeMiMoP 2015), Process Engineering (IWPE 2015), and Theory and Applications of Process Visualization (TaProViz 2015). The 42 revised papers presented were carefully reviewed and selected from 104 submissions. In addition, four short papers and one keynote (from TAProViz) are also included in this book.

On the Move to Meaningful Internet Systems: OTM 2014 Workshops - Robert Meersman 2014-10-18

This volume constitutes the refereed proceedings of the following 9 international workshops: OTM Academy, OTM Industry Case Studies Program, Cloud and Trusted Computing, C&TC, Enterprise Integration, Interoperability, and Networking, EI2N, Industrial and Business Applications of Semantic Web Technologies, INBAST, Information Systems, om Distributed Environment, ISDE, Methods, Evaluation, Tools and Applications for the Creation and Consumption of Structured Data for the e-Society, META4eS, Mobile and Social Computing for collaborative interactions, MSC, and Ontology Content, OnToContent 2014. These workshops were held as associated events at OTM 2014, the federated conferences "On The Move Towards Meaningful Internet Systems and Ubiquitous Computing", in Amantea, Italy, in October 2014. The 56 full papers presented

together with 8 short papers, 6 posters and 5 keynotes were carefully reviewed and selected from a total of 96 submissions. The focus of the workshops were on the following subjects models for interoperable infrastructures, applications, privacy and access control, reliability and performance, cloud and configuration management, interoperability in (System-of-)Systems, distributed information systems applications, architecture and process in distributed information system, distributed information system development and operational environment, ontology is use for eSociety, knowledge management and applications for eSociety, social networks and social services, social and mobile intelligence, and multimodal interaction and collaboration.

New Perspectives on Information Systems Modeling and Design - Rosado da Cruz, António Miguel 2018-11-09

Information modeling plays an important role in every level of the enterprise information

system's architecture. Modeling allows organizations to adapt and become more efficient, helping top managers and engineers outline tactics to reach strategic objectives, understand organizational needs, and design information systems that are aligned with business goals. *New Perspectives on Information Systems Modeling and Design* is an essential reference source that discusses organizational adaptation through the integration of new information technologies into existing processes and underlying supporting applications. Featuring research on topics such as application integration, change management, and mobile process activities, this book is ideally designed for managers, researchers, system developers, entrepreneurs, graduate-level students, business professionals, information system engineers, and academicians seeking coverage on emerging technological developments and practical solutions for system modeling and design.

Advances in Intelligent Process-Aware

Information Systems - Gregor Grambow

2017-05-22

This book provides a state-of-the-art perspective on intelligent process-aware information systems and presents chapters on specific facets and approaches applicable to such systems. Further, it highlights novel advances and developments in various aspects of intelligent process-aware information systems and business process management systems. Intelligence capabilities are increasingly being integrated into or created in many of today's software products and services. Process-aware information systems provide critical computing infrastructure to support the various processes involved in the creation and delivery of business products and services. Yet the integration of intelligence capabilities into process-aware information systems is a non-trivial yet necessary evolution of these complex systems. The book's individual chapters address adaptive process management, case management processes, autonomically-

capable processes, process-oriented information logistics, process recommendations, reasoning over process models, process portability, and business process intelligence. The primary target groups are researchers and PhD/Master students in the field of information systems.

On the Move to Meaningful Internet Systems: OTM 2013 Conferences - Robert Meersman 2013-09-20

This volume constitutes the refereed proceedings of the confederated international conferences: Cooperative Information Systems (CoopIS 2013), Distributed Objects and Applications (DOA-Trusted Cloud 2013), and Ontologies, Data Bases and Applications of SEMantics (ODBASE 2013) held as part of OTM 2013 in September 2013 in Graz, Austria. The 47 revised full papers presented together with 6 short papers and 5 keynotes were carefully reviewed and selected from a total of 137 submissions. The papers are organized in topical sections on business process management;

process modelling; service management; social networking; models and schemas; technical advances in cloud computing; towards trusted cloud computing; privacy for the cloud; querying and mining semantic information; semantic matching and mapping; semantic information management; semantics in use.

Advanced Information Systems Engineering - Eric Dubois 2017-06-01

This book constitutes the refereed proceedings of the 29th International Conference on Advanced Information Systems Engineering, CAiSE 2017, held in Essen, Germany, in June 2017. The 37 papers presented together with 3 keynote papers in this volume were carefully reviewed and selected from 175 submissions. The papers are organized in topical sections on information systems architecture; business process alignment; user knowledge discovery; business process performance; big data exploration; process variability management; information systems transformation and

evolution; business process modeling readability; business process adaption; data mining; process discovery; business process modeling notation.

Fundamentals of Business Intelligence -

Wilfried Grossmann 2015-06-02

This book presents a comprehensive and systematic introduction to transforming process-oriented data into information about the underlying business process, which is essential for all kinds of decision-making. To that end, the authors develop step-by-step models and analytical tools for obtaining high-quality data structured in such a way that complex analytical tools can be applied. The main emphasis is on process mining and data mining techniques and the combination of these methods for process-oriented data. After a general introduction to the business intelligence (BI) process and its constituent tasks in chapter 1, chapter 2 discusses different approaches to modeling in BI applications. Chapter 3 is an overview and

provides details of data provisioning, including a section on big data. Chapter 4 tackles data description, visualization, and reporting. Chapter 5 introduces data mining techniques for cross-sectional data. Different techniques for the analysis of temporal data are then detailed in Chapter 6. Subsequently, chapter 7 explains techniques for the analysis of process data, followed by the introduction of analysis techniques for multiple BI perspectives in chapter 8. The book closes with a summary and discussion in chapter 9. Throughout the book, (mostly open source) tools are recommended, described and applied; a more detailed survey on tools can be found in the appendix, and a detailed code for the solutions together with instructions on how to install the software used can be found on the accompanying website. Also, all concepts presented are illustrated and selected examples and exercises are provided. The book is suitable for graduate students in computer science, and the dedicated website

with examples and solutions makes the book ideal as a textbook for a first course in business intelligence in computer science or business information systems. Additionally, practitioners and industrial developers who are interested in the concepts behind business intelligence will benefit from the clear explanations and many examples.

Advanced Information Systems Engineering Workshops - Xavier Franch 2013-06-20

This book constitutes the thoroughly refereed proceedings of eight international workshops held in Valencia, Spain, in conjunction with the 25th International Conference on Advanced Information Systems Engineering, CAiSE 2013, in June 2013. The 36 full and 12 short papers

have undertaken a high-quality and selective acceptance policy, resulting in acceptance rates of up to 50% for full research papers. The eight workshops were Approaches for Enterprise Engineering Research (AppEER), International Workshop on BUSiness/IT ALignment and Interoperability (BUSITAL), International Workshop on Cognitive Aspects of Information Systems Engineering (COGNISE), Workshop on Human-Centric Information Systems (HC-IS), Next Generation Enterprise and Business Innovation Systems (NGEBIS), International Workshop on Ontologies and Conceptual Modeling (OntoCom), International Workshop on Variability Support in Information Systems (VarIS), International Workshop on Information Systems Security Engineering (WISSE).