

Advances In Conceptual Modeling Challenges And Opportunities Er 2008 Workshops Cmlsa Ecdm Fp Uml M2as Rigim Secogis Wism Barcelona Spain Lecture Notes In Computer Science

Formal Ontology in Information Systems (FOIS) is the flagship conference of the International Association for Ontology and its Applications (IAOA). Its interdisciplinary research focus lies at the intersection of philosophical ontology, linguistics, logic, cognitive science, and computer science, as well as in the applications of ontological analysis to conceptual modeling, knowledge engineering, knowledge management, information-systems development, library and information science, scientific research, and semantic technologies in general. As in previous years, FOIS 2014 was a nexus of interdisciplinary research and communication. The current proceedings is divided into four main sections, dealing with: foundations; processes, agency and dispositions; methods and tools; and applications. The last of these covers a broad spectrum of areas, including in particular biology and medicine, engineering, and economy. For the first time in its history, the conference hosted a special track: an ontology competition, the aim of which was to encourage authors to make their ontologies publicly available and to allow them to be evaluated according to a set of predetermined criteria. Papers discussing these ontologies can also be found in this volume. The book will be of interest to all those whose work involves the application of ontologies, and who are looking for a current overview of developments in formal ontology.

This book contains the papers accepted for presentation and publication in the workshop proceedings of the 28th edition of the International Conference on Conceptual Modeling (ER Conference), held during November 9–12, 2009, in Gramado, Brazil. The ER workshops complement the main ER conference and are intended to serve as an intensive collaborative forum for exchanging late-breaking ideas and theories in an evolutionary stage and related to conceptual modeling. For the 2009 edition the workshop committee received 14 excellent proposals from which the following were selected: • ACM-L: Active Conceptual Modeling of Learning • CoMoL: Conceptual Modeling in the Large • ETheCoM: Evolving Theories of Conceptual Modeling • FP-UML: Workshop on Foundations and Practices of UML • MOST-ONISW: Joint International Workshop on Metamodels, Ontologies, Semantic Technologies, and Information Systems for the Semantic Web • QoIS: Quality of Information Systems • RIGiM: Requirements, Intentions and Goals in Conceptual Modeling • SeCoGIS: Semantic and Conceptual Issues in Geographic Information Systems These workshops attracted 100 submissions from which the workshop program committees selected 33 papers, maintaining a highly competitive acceptance rate of 30%. The workshop co-chairs are highly indebted to the workshop organizers and program committees for their work. July 2009 Carlos A. Heuser Günther Pernul

This book compiles a number of contributions originating from the KESE (Knowledge Engineering and Software Engineering) workshop series from 2005 to 2015. The idea behind the series was the realignment of the knowledge engineering discipline and its strong relation to software engineering, as well as to the classical aspects of artificial intelligence research. The book introduces symbiotic work combining these disciplines, such as aspect-oriented and agile engineering, using anti-patterns, and system refinement. Furthermore, it presents successful applications from different areas that were created by combining techniques from both areas.

Covers comprehensive issues and challenges discovered through leading international XML database research.

Conceptual modeling is about describing the semantics of software applications at a high level of abstraction in terms of structure, behavior, and user interaction. Embley and Thalheim start with a manifesto stating that the dream of developing information systems strictly by conceptual modeling – as expressed in the phrase “the model is the code” – is becoming reality. The subsequent contributions written by leading researchers in the field support the manifesto's assertions, showing not only how to abstractly model complex information systems but also how to formalize abstract specifications in ways that let developers complete programming tasks within the conceptual model itself. They are grouped into sections on programming with conceptual models, structure modeling, process modeling, user interface modeling, and special challenge areas such as conceptual geometric modeling, information integration, and biological conceptual modeling. The Handbook of Conceptual Modeling collects in a single volume many of the best conceptual-modeling ideas, techniques, and practices as well as the challenges that drive research in the field. Thus it is much more than a traditional handbook for advanced professionals, as it also provides both a firm foundation for the field of conceptual modeling, and points researchers and graduate students towards interesting challenges and paths for how to contribute to this fundamental field of computer science.

This book constitutes the refereed joint proceedings of six workshops held in conjunction with the 26th International Conference on Conceptual Modeling. Topics include conceptual modeling for life sciences applications, foundations and practices of UML, ontologies and information systems for the semantic Web, quality of information systems, requirements, intentions and goals in conceptual modeling, and semantic and conceptual issues in geographic information systems.

This book constitutes the refereed joint proceedings of seven international workshops held in conjunction with the 25th International Conference on Conceptual Modeling, ER 2006, in Tucson, AZ, USA in November 2006. The 39 revised full papers presented together with the outlines of three tutorials were carefully reviewed and selected from 95 submissions. The design of various virtual environments should be based on the needs of a diverse population of users around the globe. Interface design should be user centric and should strive for making the user's interaction as simple, meaningful, and efficient as possible. User Interface Design for Virtual Environments: Challenges and Advances focuses on challenges that designers face in creating interfaces for users of various virtual environments. Chapters included in this book address various critical issues that have implications for user interface design from a number of different viewpoints. This book is written for professionals who want to improve their understanding of challenges associated with user interface design issues for globally-dispersed users in various virtual environments.

This book constitutes the refereed proceedings of seven workshops and a symposium, held at the 35th International Conference on Conceptual Modeling, ER 2016, in Gifu, Japan. The 19 revised full and 3 keynote papers were carefully reviewed and selected out of 52 submissions to the following events: Conceptual Modeling for Ambient Assistance and Healthy Ageing, AHA 2016; Modeling and Management of Big Data, MoBiD 2016; Modeling and Reasoning for Business Intelligence, MORE-BI 2016; Conceptual Modeling in Requirements and Business Analysis, MREBA 2016; Quality of Models and Models of Quality, QMMQ 2016; and the Symposium on Conceptual Modeling Education, SCME 2016; and Models and Modeling on Security and Privacy, WM2SP 2016.

This illuminating text/reference presents a review of the key aspects of the modeling and simulation (M&S) life cycle, and examines the challenges of M&S in different application areas. The authoritative work offers valuable perspectives on the future of research in M&S, and its role in engineering complex systems. Topics and features: reviews the challenges of M&S for urban infrastructure, healthcare delivery, automated vehicle manufacturing, deep space

missions, and acquisitions enterprise; outlines research issues relating to conceptual modeling, covering the development of explicit and unambiguous models, communication and decision-making, and architecture and services; considers key computational challenges in the execution of simulation models, in order to best exploit emerging computing platforms and technologies; examines efforts to understand and manage uncertainty inherent in M&S processes, and how these can be unified under a consistent theoretical and philosophical foundation; discusses the reuse of models and simulations to accelerate the simulation model development process. This thought-provoking volume offers important insights for all researchers involved in modeling and simulation across the full spectrum of disciplines and applications, defining a common research agenda to support the entire M&S research community.

The five volume set LNCS 7663, LNCS 7664, LNCS 7665, LNCS 7666 and LNCS 7667 constitutes the proceedings of the 19th International Conference on Neural Information Processing, ICONIP 2012, held in Doha, Qatar, in November 2012. The 423 regular session papers presented were carefully reviewed and selected from numerous submissions. These papers cover all major topics of theoretical research, empirical study and applications of neural information processing research. The 5 volumes represent 5 topical sections containing articles on theoretical analysis, neural modeling, algorithms, applications, as well as simulation and synthesis.

In the era of technological ubiquity and online interaction, the importance of proper computer training cannot be understated. Following established standards and practices boosts the value of communication in digital environments for all users. The Handbook of Research on Interactive Information Quality in Expanding Social Network Communications examines the strategic elements involved in ICT training within the context of online networks. Combining scientific, theoretical, and practical perspectives on the importance of communicability in such networks, this book is an essential reference source for researchers, students, teachers, designers, ICT specialists, engineers, and computer programmers interested in social networking technologies.

This book constitutes the refereed proceedings of workshops, held at the 32nd International Conference on Conceptual Modeling, ER 2013, in Hong Kong, China in November 2013. The 30 revised full papers were carefully reviewed and selected out of 57 submissions. The papers are organized in sections related to the individual workshops: LSAWM, Legal and Social Aspects in Web Modeling; MoBiD, 1st International Workshop on Modeling and Management of Big Data; RIGiM, 5th International Workshop on Requirements, Intentions and Goals in Conceptual Modeling; SeCoGIS, 7th International Workshop on Semantic and Conceptual Issues in Geographic Information Systems; WISM, 10th International Workshop on Web Information Systems Modeling; DaSeM, Data Mining and Semantic Computing for Object Modeling; SCME, 1st Symposium on Conceptual Modeling Education; and PhD Symposium. Continuing the ER tradition, the ER 2013 workshops provided researchers, students, and industry professionals with a forum to present and discuss emerging, cutting-edge topics related to conceptual modeling and its applications.

This book constitutes the refereed proceedings of three workshops symposia, held at the 40th International Conference on Conceptual Modeling, ER 2021, which were held virtually and in St. John's, NL, Canada, in October 2021. The 11 papers promote and disseminate research on theories of concepts underlying conceptual modeling, methods and tools for developing and communicating conceptual models, techniques for transforming conceptual models into effective implementations, and the impact of conceptual modeling techniques on databases, business strategies and information systems. The following workshops are included in this volume: Second Workshop on Conceptual Modeling for NoSQL Data Stores (CoMoNoS); 4th International Workshop on Empirical Methods in Conceptual Modeling (EmpER); and Second

International Workshop on Conceptual Modeling for Life Sciences (CMLS).

This book constitutes the refereed proceedings of workshops, held at the 30th International Conference on Conceptual Modeling, ER 2011, in Brussels, Belgium in October/November 2011. The 31 revised full papers presented together with 9 posters and demonstrations (out of 88 submissions) for the workshops and the 6 papers (out of 11 submissions) for the industrial track were carefully reviewed and selected. The papers are organized in sections on the workshops Web Information Systems Modeling (WISM); Modeling and Reasoning for Business Intelligence (MORE-BI); Software Variability Management (Variability@ER); Ontologies and Conceptual Modeling (Onto.Com); Semantic and Conceptual Issues in GIS (SeCoGIS); and Foundations and Practices of UML (FP-UML).

Many of the initial developments towards the Internet of Things have focused on the combination of Auto-ID and networked infrastructures in business-to-business logistics and product lifecycle applications. However, the Internet of Things is more than a business tool for managing business processes more efficiently and more effectively – it will also enable a more convenient way of life. Since the term Internet of Things first came to attention when the Auto-ID Center launched their initial vision for the EPC network for automatically identifying and tracing the flow of goods within supply-chains, increasing numbers of researchers and practitioners have further developed this vision. The authors in this book provide a research perspective on current and future developments in the Internet of Things. The different chapters cover a broad range of topics from system design aspects and core architectural approaches to end-user participation, business perspectives and applications.

Preceded by: Advanced practice nursing. 4th ed. c2009.

This book constitutes the refereed proceedings of five workshops symposia, held at the 38th International Conference on Conceptual Modeling, ER 2019, in Salvador, Brazil, in November 2019. The 34 papers promote and disseminate research on theories of concepts underlying conceptual modeling, methods and tools for developing and communicating conceptual models, techniques for transforming conceptual models into effective implementations, and the impact of conceptual modeling techniques on databases, business strategies and information systems. The following workshops are included in this volume: Workshop on Conceptual Modeling, Ontologies and Metadata Management for FAIR Data (FAIR), 6th Workshop on Conceptual Modeling in Requirements Engineering and Business Analysis (MREBA), 2nd International Workshop on Empirical Methods in Conceptual Modeling (EmpER), 8th International Workshop on Modeling and Management of Big Data (MoBiD19), and 7th International Workshop on Ontologies and Conceptual Modelling (OntoCom).

We would like to welcome you to the proceedings of the workshops held in conjunction with the 27th International Conference on Conceptual Modeling (ER 2008). While the ER main conference covers a wide spectrum of conceptual modeling research, increasingly complex real-world problems demand new perspectives and active research in new applications. The ER workshops attempt to provide researchers, students, and industry professionals with a forum to present and discuss emerging hot topics related to conceptual modeling. We received 13 excellent proposals for workshops to be held with ER 2008. We accepted the following seven based on peer reviews: 1. The Second International Workshop on Conceptual Modeling for Life Sciences Applications (CMLSA 2008), organized by Yi-Ping Phoebe Chen and Sven Hartmann. 2. The 5th International Workshop on Evolution and Change in Data Management (ECDM 2008), organized by Fabio Grandi. 3. The 4th International Workshop on Foundations and Practices of UML (FP-UML 2008), organized by Juan Trujillo and Andreas L. Opdahl. 4. The First International Workshop on Modeling Mobile Applications and Services (M2AS 2008), organized by Fernando Ferri, Patrizia Grifoni, and Maria Chiara Caschera. 5. The Second International Workshop on Requirements, Intentions and Goals in Conceptual Modeling (RIGIM 2008), organized by Colette Rolland, C-son Woo, and Camille Salinesi. 6. The Second

International Workshop on Semantic and Conceptual Issues in Geographic Information Systems (SeCoGIS 2008), organized by Esteban Zimányi and Christophe Claramunt. 7. The 5th International Workshop on Web Information Systems Modeling (WISM 2008), organized by Flavius Frasincar, Geert-Jan Houben, and Philippe Thiran.

The objective of the workshops held in conjunction with ER 2002, the 21st International Conference on Conceptual Modeling, was to give participants the opportunity to present and discuss emerging hot topics, thus adding new perspectives to conceptual modeling. To meet this objective, we selected the following four workshops: – 2nd International Workshop on Evolution and Change in Data Management (ECDM 2002) – ER/IFIP8. 1 Workshop on Conceptual Modelling Approaches to Mobile - formation Systems Development (MobIMod 2002) – International Workshop on Conceptual Modeling Quality (IWCMQ 2002) – 3rd International Joint Workshop on Conceptual Modeling Approaches for E-business: a Web Service Perspective (eCOMO 2002) ER 2002 was organized so that there would be no overlap between the conference sessions and the workshops. This proceedings contains workshop papers that were revised by the authors following discussions during the conference. We are deeply indebted to the members of the organizing committees and program committees of these workshops for their hard work. July 2003 Antoni Olivé, Masatoshi Yoshikawa, and Eric S. K. Yu Workshop Co-chairs ER 2002 ECDM 2002 Change is a fundamental but sometimes neglected aspect of information and database systems. The management of evolution and change and the ability of database, information and knowledge-based systems to deal with change is an essential component in developing and maintaining truly useful systems. Many approaches to handling evolution and change have been proposed in various areas of data management, and this forum seeks to bring together researchers and practitioners from both more established areas and from emerging areas to look at this issue.

This book constitutes the refereed proceedings of workshops, held at the 33rd International Conference on Conceptual Modeling, ER 2014, in Atlanta, GA, USA in October 2014. The 24 revised full and 6 short papers were carefully reviewed and selected out of 59 submissions and are presented together with 4 demonstrations. The papers are organized in sections related to the individual workshops: the First International Workshop on Enterprise Modeling, ENMO 2014; the Second International Workshop on Modeling and Management of Big Data, MoBiD 2014; the First International Workshop on Conceptual Modeling in Requirements and Business Analysis, MReBA 2014; the First International Workshop on Quality of Models and Models of Quality, QMMQ 2014; the 8th International Workshop on Semantic and Conceptual Issues in GIS, SeCoGIS 2014; and the 11th International Workshop on Web Information Systems Modeling, WISM 2014. The contributions cover a variety of topics in conceptual modeling, including requirements and enterprise modeling, modeling of big data, spatial conceptual modeling, exploring the quality of models, and issues specific to the design of web information systems.

The objective of the workshops associated with the ER'99 18th International Conference on Conceptual Modeling is to give participants access to high level presentations on specialized, hot, or emerging scientific topics. Three themes have been selected in this respect: — Evolution and Change in Data Management (ECDM'99) dealing with handling the evolution of data and data structure, — Reverse Engineering in Information Systems (REIS'99) aimed at exploring the issues raised by legacy systems, — The World Wide Web and Conceptual Modeling (WWWCM'99) which analyzes the mutual contribution of WWW resources and techniques with conceptual modeling. ER'99 has been organized so that there is no overlap between conference sessions and the workshops. Therefore participants can follow both the conference and the workshop presentations they are interested in. I would like to thank the ER'99 program co-chairs, Jacky Akoka and Mokrane Bouzeghoub for having given me the

opportunity to organize these workshops. I would also like to thank Stephen Liddle for his valuable help in managing the evaluation procedure for submitted papers and helping to prepare the workshop proceedings for publication. August 1999 Jacques Kouloumdjian Preface for ECDM'99 The first part of this volume contains the proceedings of the First International Workshop on Evolution and Change in Data Management, ECDM'99, which was held in conjunction with the 18th International Conference on Conceptual Modeling (ER'99) in Paris, France, November 15-18, 1999.

An authoritative source about methods, languages, methodologies and supporting tools for constructing information systems that also provides examples for reference models. Its strength is the careful selection of each of the above mentioned components, based on technical merit. The second edition completely revises all articles and features new material on the latest developments in XML & UML. The structure follows the definition of the major components of Enterprise Integration as defined by GERAM (Generalised Enterprise Reference Architecture and Methodology). 1st edition sold about 600 copies since January 2003.

This book constitutes the refereed proceedings of five workshops symposia, held at the 39th International Conference on Conceptual Modeling, ER 2020, which were supposed to be held in Vienna, Austria, in November 2020, but were held virtually due to the COVID-19 pandemic instead. The 20 papers promote and disseminate research on theories of concepts underlying conceptual modeling, methods and tools for developing and communicating conceptual models, techniques for transforming conceptual models into effective implementations, and the impact of conceptual modeling techniques on databases, business strategies and information systems. The following workshops are included in this volume: First Workshop on Conceptual Modeling Meets Artificial Intelligence and Data-Driven Decision Making (CMAI); First International Workshop on Conceptual Modeling for Life Sciences (CMLS); Second Workshop on Conceptual Modeling, Ontologies and (Meta)data Management for Findable, Accessible, Interoperable and Reusable (FAIR) Data (CMOMM4FAIR); First Workshop on Conceptual Modeling for NoSQL Data Stores (CoMoNoS); and Third International Workshop on Empirical Methods in Conceptual Modeling (EmpER).

This book constitutes the refereed proceedings of seven workshops and a symposium, held at the 34th International Conference on Conceptual Modeling, ER 2015, in Stockholm, Sweden. The 26 revised full and 8 invited papers were carefully reviewed and selected out of 52 submissions to the following events: Conceptual Modelling for Ambient Assistance and Healthy Ageing, AHA-2015; Conceptual Modelling of Services, CMS-2015; Event Modelling and Processing in Business Process Management, EMoV-2015; Modelling and Management of Big Data, MoBID-2015; Modelling and Reasoning for Business Intelligence, MORE-BI-2015; Conceptual Modelling in Requirements Engineering and Business Analysis, MREBA-2015; Quality of Modelling and Modelling of Quality, QMMQ-2015; and the Symposium on Conceptual Modelling Education, SCME-2015.

This book constitutes the thoroughly refereed joint post-proceedings of four international workshops held in conjunction with the 21st International Conference on Conceptual Modeling, ER 2002, in Tampere, Finland in October 2002. The 38 revised full papers presented were carefully selected and improved during two rounds of reviewing and revision. The papers are organized in topical sections on management of time and changes in information systems;

architectures, models, and tools for systems evolution; conceptual modeling approaches to mobile information systems development; quality of conceptual models; requirements and entity relationship models; class models and architectures; Web and interactive models; processes, models, and Web services; e-business methods and technologies; and success factors for conceptual modeling in e-business.

This book constitutes the refereed joint proceedings of six international workshops held in conjunction with the 23rd International Conference on Conceptual Modeling, ER 2004, in Shanghai, China in November 2004. The 56 revised full papers presented were carefully reviewed and selected from 163 submissions. The papers are organized in topical sections on geographical conceptual modeling; spatial storage, indexing, and data consistency; spatial representation and spatial services; spatial queries and retrieval, Web information integration; Web information mining; conceptual models for Web information; Web information systems and Webservices; systems evolution support in conceptual modeling; temporal and evolution aspects in Internet-based information systems; schema evolution and versioning in data management; conceptual modeling of agents; agents applications; digital government systems; digital government technologies; e-business systems requirements engineering; and e-business processes and infrastructure.

This Open Access book presents the results of the "Collaborative Embedded Systems" (CrEst) project, aimed at adapting and complementing the methodology underlying modeling techniques developed to cope with the challenges of the dynamic structures of collaborative embedded systems (CESs) based on the SPES development methodology. In order to manage the high complexity of the individual systems and the dynamically formed interaction structures at runtime, advanced and powerful development methods are required that extend the current state of the art in the development of embedded systems and cyber-physical systems. The methodological contributions of the project support the effective and efficient development of CESs in dynamic and uncertain contexts, with special emphasis on the reliability and variability of individual systems and the creation of networks of such systems at runtime. The project was funded by the German Federal Ministry of Education and Research (BMBF), and the case studies are therefore selected from areas that are highly relevant for Germany's economy (automotive, industrial production, power generation, and robotics). It also supports the digitalization of complex and transformable industrial plants in the context of the German government's "Industry 4.0" initiative, and the project results provide a solid foundation for implementing the German government's high-tech strategy "Innovations for Germany" in the coming years.

The papers in this volume aim at obtaining a common understanding of the challenging research questions in web applications comprising web information systems, web services, and web interoperability; obtaining a common

understanding of verification needs in web applications; achieving a common understanding of the available rigorous approaches to system development, and the cases in which they have succeeded; identifying how rigorous software engineering methods can be exploited to develop suitable web applications; and at developing a European-scale research agenda combining theory, methods and tools that would lead to suitable web applications with the potential to implement systems for computation in the public domain.

Health information technologies are revolutionizing and streamlining healthcare, and uptake continues to rise dramatically. If these technologies are to be effectively implemented, capacity must be built at a regional, national and global level, and the support and involvement of both government and industry will be vital. This book presents the proceedings of the 2017 Information Technology and Communications in Health conference (ITCH 2017), held in Victoria, BC, Canada, in February 2017. The conference considers, from a variety of perspectives, what is required to move the technology forward to real, sustained and widespread use, and the solutions examined range from improvements in usability and training to the need for new and improved design of information systems, user interfaces and interoperable solutions. Government policies, mandates, initiatives and the need for regulation are also explored, as is the requirement for improved interaction between industrial, governmental and academic partners. With its focus on building the next generation of health informatics and the capacity required to deliver better healthcare worldwide, this book will be of interest to all those involved in the provision of healthcare.

This book constitutes the refereed proceedings of workshops, held at the 29th International Conference on Conceptual Modeling, ER 2010, in Vancouver, Canada, in November 2010. The 31 revised full papers presented were carefully reviewed and selected from 82 submissions. The papers are organized in sections on the workshops Semantic and Conceptual Issues in GIS (SeCoGIS); Conceptual Modeling of Life Sciences Applications (CMLSA); Conceptual Modelling of Services (CMS); Active Conceptual Modeling of Learning (ACM-L); Web Information Systems Modeling (WISM); Domain Engineering (DE@ER); and Foundations and Practices of UML (FP-UML).

This book constitutes the refereed proceedings of five workshops symposia, held at the 37th International Conference on Conceptual Modeling, ER 2018, in Xi'an, China, in October 2018. The 42 papers promote and disseminate research on theories of concepts underlying conceptual modeling, methods and tools for developing and communicating conceptual models, techniques for transforming conceptual models into effective implementations, and the impact of conceptual modeling techniques on databases, business strategies and information systems. The following workshops are included in this volume: Emp-ER: Empirical Methods in Conceptual Modeling, MoBiD: Modeling and Management of Big Data, MREBA: Conceptual Modeling in Requirements and Business Analysis, QMMQ: Quality of Models and Models of Quality, SCME: Conceptual Modeling

This book constitutes the refereed proceedings of workshops, held at the 31st International Conference on Conceptual Modeling, ER 2012, in Florence, Italy in October 2012. The 32 revised papers presented together with 6 demonstrations were carefully reviewed and selected from 84 submissions. The papers are organized in sections on the workshops CMS 2012, EDCM-NoCoDa, MODIC, MORE-BI, RIGIM, SeCoGIS and WISM. The workshops cover different conceptual modeling topics, from requirements, goal and service modeling, to evolution and change management, to non-conventional data access, and they span a wide range of domains including Web information systems, geographical information systems, business intelligence, data-intensive computing.

This handbook covers a wide range of topics related to the collection, processing, analysis, and use of geospatial data in their various forms. This handbook provides an overview of how spatial computing technologies for big data can be organized and implemented to solve real-world problems. Diverse subdomains ranging from indoor mapping and navigation over trajectory computing to earth observation from space, are also present in this handbook. It combines fundamental contributions focusing on spatio-textual analysis, uncertain databases, and spatial statistics with application examples such as road network detection or colocation detection using GPUs. In summary, this handbook gives an essential introduction and overview of the rich field of spatial information science and big geospatial data. It introduces three different perspectives, which together define the field of big geospatial data: a societal, governmental, and governance perspective. It discusses questions of how the acquisition, distribution and exploitation of big geospatial data must be organized both on the scale of companies and countries. A second perspective is a theory-oriented set of contributions on arbitrary spatial data with contributions introducing into the exciting field of spatial statistics or into uncertain databases. A third perspective is taking a very practical perspective to big geospatial data, ranging from chapters that describe how big geospatial data infrastructures can be implemented and how specific applications can be implemented on top of big geospatial data. This would include for example, research in historic map data, road network extraction, damage estimation from remote sensing imagery, or the analysis of spatio-textual collections and social media. This multi-disciplinary approach makes the book unique. This handbook can be used as a reference for undergraduate students, graduate students and researchers focused on big geospatial data. Professionals can use this book, as well as practitioners facing big collections of geospatial data.

This book constitutes revised selected papers from the Second International Workshop on Modelling to Program, M2P 2020, held in Lappeenranta, Finland, in March 2020. The 10 papers presented were thoroughly reviewed and selected from 24 submissions. The papers provide a discussion on novel approaches to programming based on modelling approaches such as model-driven

development (MDE, MDA, MDD) and conceptual-model programming and their future developments. The topics of the papers include notions of models that can be understood and used as programs, models-at-runtime, advanced conceptual modelling, conceptual-model programming, modelling foundation, transformation of models to programs, model suites/ensembles for programmers, modelling as the first step to programming and its revisions, advanced model-driven programming and software modernisation, modelling in applications.

Advances in Conceptual Modeling - Challenges and OpportunitiesER 2008 Workshops CMLSA, ECDM, FP-UML, M2AS, RIGiM, SeCoGIS, WISM, Barcelona, Spain, October 20-23, 2008, ProceedingsSpringer Science & Business Media

[Copyright: f416e7487b3004314c6256a40a81402d](https://doi.org/10.1007/978-3-642-00431-4_6256a40a81402d)