Systems Analysis Design Eurosymposium

This book contains the refereed proceedings of the 13th International Conference on Business Process Modeling, Development and Support (BPMDS 2012) and the 17th International Conference on Exploring Modeling Methods for Systems Analysis and Design (EMMSAD 2012), held together with the 24th International Conference on Advanced Information Systems Engineering (CAiSE 2012) in Gda?sk, Poland, in June 2012. The 17 papers accepted for BPMDS were selected from 48 submissions and cover a wide spectrum of issues related to business process development, modeling, and support. They are grouped into sections on business process in the cloud, advanced BPM in an organizational context, similarity, variations and configuration, BPM and requirements engineering, humans and business process models, and BPM technologies using computational methods. The 13 papers accepted for EMMSAD were chosen from 28 submissions and focus on exploring, evaluating, and enhancing current information modeling methods and methodologies. They are grouped in sections on modeling of enterprise architecture, modeling facts and rules, business process modeling, modeling of non-functional requirements, safety modeling and analysis, quality of models and modeling languages, and supporting the learning of conceptual modeling.

This volume presents the revised and peer reviewed contributions of the "ERP Future 2012" conference held in Salzburg/Austria on November 11th - 12th, 2012?. The conference is a platform for research in ERP systems and closely related topics like business processes, business intelligence, and enterprise information systems in general. To master the challenges of ERP comprehensively, the ERP Future 2012 Research conference accepted contributions both with a business focus as well as with an IT focus to consider enterprise resource planning from various viewpoints. This combination of business and IT aspects is a unique characteristic of the conference and of this volume that resulted in valuable contributions with high practical impact.

This book provides the state-of-the-art intelligent methods and techniques for solving real-world problems along with a vision of the future research. The fifth 2020 Future Technologies Conference was organized virtually and received a total of 590 submissions from academic pioneering researchers, scientists, industrial engineers, and students from all over the world. The submitted papers covered a wide range of important topics including but not limited to computing, electronics, artificial intelligence, robotics, security and communications and their applications to the real world. After a double-blind peer review process, 210 submissions (including 6 poster papers) have been selected to be included in these proceedings. One of the meaningful and valuable dimensions of this conference is the way it brings together a large group of technology geniuses in one venue to not only present breakthrough research in future technologies, but also to promote discussions and debate of relevant issues, challenges, opportunities and research findings. The authors hope that readers find the book interesting, exciting and inspiring.

This book constitutes the refereed proceedings of the 13th PLAIS EuroSymposium 2021 which was held in Sopot, Poland, on September 23, 2021. The objective of the PLAIS EuroSymposium 2021 is to promote and develop high quality research on all issues related to digital transformation. It provides a forum for IS researchers and practitioners in Europe and beyond to interact, collaborate, and develop this field. The 10 papers presented in this volume were carefully reviewed and selected from 34 submissions. They were organized in topical sections named: digital enterprises; smart cities; digital education; and innovative methods in data and process analysis.

Efficient and equitable policies for managing disaster risks and adapting to global environmental change are critically dependent on

development of robust options supported by integrated modeling. The book is based on research and state-of-the art models developed at IIASA (International Institute for Applied Systems Analysis) and within its cooperation network. It addresses the methodological complexities of assessing disaster risks, which call for stochastic simulation, optimization methods and economic modeling. Furthermore, it describes policy frameworks for integrated disaster risk management, including stakeholder participation facilitated by user-interactive decision-support tools. Applications and results are presented for a number of case studies at different problem scales and in different socio-economic contexts, and their implications for loss sharing policies and economic development are discussed. Among others, the book presents studies for insurance policies for earthquakes in the Tuscany region in Italy and flood risk in the Tisza river basin in Hungary. Further, it investigates the economic impact of natural disasters on development and possible financial coping strategies; and applications are shown for selected South Asian countries. The book is addressed both to researchers and to organizations involved with catastrophe risk management and risk mitigation policies.

This book constitutes the refereed proceedings of the 24th International Conference on Advanced Information Systems Engineering, CAiSE 2012, held in Gdansk, Poland, in June 2012. The 42 revised full papers, 2 full-length invited papers and 4 short tutorial papers, were carefully reviewed and selected from 297 submissions. The contributions have been grouped into the following topical sections: business process model analysis; service and component composition; language and models; system variants and configuration; process mining; ontologies; requirements and goal models; compliance; monitoring and prediction; services; case studies; business process design; feature models and product lines; and human factors.

Presenting a comprehensive coverage, Air Transport System Analysis and Modelling is a unique text dealing with the analysis and modelling of the processes and operations carried out in all three parts of the air transport system, namely, airports, air traffic control and airlines. Seen from a planners point of view, this book provides insights into current methods and also gives details of new research. Methods are given for the analysis and modelling of the capacity, quality and economics of the service offered to users and includes illustrative analytical and simulation models of the systems operations supported by an appropriate analysis of real world events and applications. Undergraduates and graduates in the field of air transport planning and technology, applied operations research and applied transport economics will find this book to be of interest, as will specialists involved with transport institutes and consulting firms, policy makers dealing with air transport and the analysts and planners employed at air transport enterprises.

This book constitutes the proceedings of the 7th Euro Symposium on Systems Analysis and Design, SIGSAND/PLAIS 2014, held in Gda?sk, Poland, in September 2014. The objective of this symposium is to promote and develop high-quality research on all issues related to systems analysis and design (SAND). It provides a forum for SAND researchers and practitioners in Europe and beyond to interact, collaborate, and develop their field. The 7 papers were carefully reviewed and selected with an acceptance rate of 40% cover topics in information systems evaluation and education, and they reflect current trends in systems analysis and design.

Energy Efficiency of Medical Devices and Healthcare Facilities provides comprehensive coverage of cutting-edge, interdisciplinary research, and commercial solutions in this field. The authors discuss energy-related challenges, such as energy-efficient design, including renewable energy, of different medical devices from a hardware and mechanical perspectives, as well as energy management solutions and techniques in healthcare networks and facilities. They also discuss energy-related trade-offs to maximize the medical devices availability, especially battery-operated ones, while providing immediate response and low latency communication in emergency situations, sustainability and

robustness for chronic disease treatment, in addition to high protection against cyber-attacks that may threaten patients' lives. Finally, the book examines technologies and future trends of next generation healthcare from an energy efficiency and management point of view, such as personalized or smart health and the Internet of Medical Things — IoMT, where patients can participate in their own treatment through innovative medical devices and software applications and tools. The books applied approach makes it a useful resource for engineering researchers and practitioners of all levels involved in medical devices development, healthcare systems, and energy management of healthcare facilities. Graduate students in mechanical and electric engineering, and computer science students and professionals also benefit. Provides in-depth knowledge and understanding of the benefits of energy efficiency in the design of medical devices and healthcare networks and facilities Presents best practices and state-of-art techniques and commercial solutions in energy management of healthcare networks and systems Explores key energy tradeoffs to provide scalable, robust, and effective healthcare systems and networks

This book constitutes the refereed proceedings of the SIGSAND/PLAIS EuroSymposium 2015 titled Information Systems: Development, Applications, Education, held in Gdansk, Poland, in September 25. The objective of this symposium is to promote and develop high-quality research on all issues related to systems analysis and design (SAND). It provides a forum for SAND researchers and practitioners in Europe and beyond to interact, collaborate, and develop their field. The 11 papers presented in this volume were carefully reviewed and selected from 28 submissions. They are organized in topical sections on information systems development; business process modeling; and information systems education. .

This book focuses on methods and tools for intelligent data analysis, aimed at narrowing the increasing gap between data gathering and data comprehension, and emphasis will also be given to solving of problems which result from automated data collection, such as analysis of computer-based patient records, data warehousing tools, intelligent alarming, effective and efficient monitoring, and so on. This book aims to describe the different approaches of Intelligent Data Analysis from a practical point of view: solving common life problems with data analysis tools.

International Academic Conference in Prague 2017

This book constitutes the refereed proceedings of the 10th SIGSAND/PLAIS EuroSymposium 2017 titled Information Systems: Research, Development, Applications, and Education, held in Gdansk and Sopot, Poland, on September 27, 2017. The objective of the EuroSymposium on Systems Analysis and Design is to promote and develop high quality research on all issues related to analysis and design (SAND). It provides a forum for SAND researchers and practitioners in Europe and beyond to interact, collaborate, and develop their field. The 10 papers presented in this volume were carefully reviewed and selected from 45 submissions.They are organized in topical sections on data analytics, Web-based information systems, and information systems development.

The International Conference on Systems Science 2013 (ICSS 2013) was the 18th event of the series of international scientific conferences for researchers and practitioners in the fields of systems science and systems engineering. The conference took place in Wroclaw, Poland during September 10-12, 2013 and was organized by Wroclaw University of Technology and co-organized by: Committee of Automatics and Robotics of Polish Academy of Sciences, Committee of Computer Science of Polish Academy of Sciences and Polish Section of IEEE. The papers included in the proceedings cover the following topics: Control Theory, Databases and Data Mining, Image and Signal Processing, Machine Learning, Modeling and Simulation, Operational Research, Service Science, Time series and System Identification. The accepted and presented papers highlight new trends and challenges in systems science and systems engineering.

This title was first published in 2001. A delightfully oriented selection of international state-of-the-art research in applied regional science, this informative volume places particular emphasis on the use of qualitative/quantitative methodologies in transportation and spatial dynamics. It presents new theoretical contributions in the context of spatial competition dynamics, particularly illustrating various combinations of methods and models regarding new measures of competition/cohesion in the two main fields of transportation and spatial dynamics.

In 1985 it was 20 years since Nobel Laureate Herbert A. Simon published: 'THE SHAPE OF AUTOMATION: For Men and Management'. This short but important and still topical book dwells on three subjects: - The Long-Range Economic Effects of Automation; - Will the Corporation be Managed by Machines? - The New Science of Management Decision. In contrast with George Orwell, who was a critic of contemporary political systems rather than a prophet, Simon portrays a far more rosy picture of our 'brave new world'. Simon's work breathes optimism. First, computer technology; looking back it is aoubtful whether even the professor expected the hardware development ~e have wittnessed. Secondly, our ability to 'tame the beast'; there is now not much reason for complacency and satisfaction. Offices and factories can by no means be called automated, at most semi-automated. Thirdly the organizational and social implications of these rapid technological developments; referring to what he then called: 'The Computer and the new decision making techniques ..• ' Concerning this last point, there is little need to emphasize that had been less practical application in organizations than the often impressive theoretical developments would lead one to believe. In Europe this situation is even more accute than in the USA and Japan. The ESPRIT programme of the ECC and many similar national programs intend to bridge the gap.

This proceeding book of Nostradamus conference (http://nostradamus-conference.org) contains accepted papers presented at this event in 2012. Nostradamus conference was held in the one of the biggest and historic city of Ostrava (the Czech Republic, http://www.ostrava.cz/en), in September 2012. Conference topics are focused on classical as well as modern methods for prediction of dynamical systems with applications in science, engineering and economy. Topics are (but not limited to): prediction by classical and novel methods, predictive control, deterministic chaos and its control, complex systems, modelling and prediction of its dynamics and much more.

This book constitutes the refereed proceedings of the SIGSAND/PLAIS EuroSymposium 2015 titled Information Systems: Development, Applications, Education, held in Gdansk, Poland, in September 25. The objective of this symposium is to promote and develop high-quality research on all issues related to systems analysis and design (SAND). It provides a forum for SAND researchers and practitioners in Europe and beyond to interact, collaborate, and develop their field. The 11 papers presented in this volume were carefully reviewed and selected from 28 submissions. They are organized in topical sections on information systems development; business process modeling; and information systems education.

Social sciences have always been an important tool that enables human beings to examine and understand society. Through social sciences, researchers gain understandings of social phenomena and changes by providing commentaries, producing

explanations, and attempting to synthesize a diversity of information sets to formulate theories. Since the concept of change has been the hallmark of the new millennium, researchers have witnessed a transformation in every aspect of the modern world at an ever-increasing speed, particularly in the social facet of human life. Ways of thinking that had previously been upheld and taught may, therefore, no longer be appropriate or effective as tools to understand contemporary phenomena and changes. The Handbook of Research on Current Trends in Asian Economics, Business, and Administration is a critical reference source that examines different aspects of social sciences, management, sociology, and education to better understand today's society and social life in the Asian context. The book identifies trends, impacts, and implications of disruptive technologies for business and socio-economic development as well as strategic advantage on different levels of business and administration. Covering topics that include e-commerce, green management, information technology, economic growth, and distance learning, this book is essential for economists, academicians, government officials, policymakers, social scientists, managers, leaders, behavioral scientists, academicians, researchers, and students.

This book constitutes the proceedings of the 4th EuroSymposium on Systems Analysis and Design, SIGSAND/PLAIS 2011, held in Gda?sk, Poland, in September 2011. The objective of this symposium is to promote and develop high-quality research on all issues related to systems analysis and design (SAND). It provides a forum for SAND researchers and practitioners in Europe and beyond to interact, collaborate, and develop their field. The 9 papers were carefully reviewed and selected from 20 submissions. An additional revision took place after the conference to incorporate discussion results from the presentation. The contributions are organized into topical sections on business process modeling, integrated systems development, and software development.

Computing Handbook, Third Edition: Information Systems and Information Technology demonstrates the richness and breadth of the IS and IT disciplines. The second volume of this popular handbook explores their close links to the practice of using, managing, and developing IT-based solutions to advance the goals of modern organizational environments. Established leading experts and influential young researchers present introductions to the current status and future directions of research and give in-depth perspectives on the contributions of academic research to the practice of IS and IT development, use, and management Like the first volume, this second volume describes what occurs in research laboratories, educational institutions, and public and private organizations to advance the effective development and use of computers and computing in today's world. Research-level survey articles provide deep insights into the computing discipline, enabling readers to understand the principles and practices that drive computing education, research, and development in the twenty-first century.

This book tackles the recent research directions in using the newly emerged technologies during the era of COVID-19 pandemic. It mainly focuses on using emerging technologies and their impact on health care, education, and society. It also provides insights into the current challenges and constraints in using technologies during the era of COVID-19 pandemic and exposes new opportunities for future research in the domain.

E-health applications such as tele-medicine, tele-radiology, tele-ophthalmology, and tele-diagnosis are very promising

and have immense potential to improve global healthcare. They can improve access, equity, and quality through the connection of healthcare facilities and healthcare professionals, diminishing geographical and physical barriers. One critical issue, however, is related to the security of data transmission and access to the technologies of medical information. Currently, medical-related identity theft costs billions of dollars each year and altered medical information can put a person's health at risk through misdiagnosis, delayed treatment or incorrect prescriptions. Yet, the use of hand-held devices for storing, accessing, and transmitting medical information is outpacing the privacy and security protections on those devices. Researchers are starting to develop some imperceptible marks to ensure the tamper-proofing, cost effective, and guaranteed originality of the medical records. However, the robustness, security and efficient image archiving and retrieval of medical data information against these cyberattacks is a challenging area for researchers in the field of e-health applications. Intelligent Data Security Solutions for e-Health Applications focuses on cutting-edge academic and industry-related research in this field, with particular emphasis on interdisciplinary approaches and novel techniques to provide security solutions for smart applications. The book provides an overview of cutting-edge security techniques and ideas to help graduate students, researchers, as well as IT professionals who want to understand the opportunities and challenges of using emerging techniques and algorithms for designing and developing more secure systems and methods for e-health applications. Investigates new security and privacy requirements related to eHealth technologies and large sets of applications Reviews how the abundance of digital information on system behavior is now being captured, processed, and used to improve and strengthen security and privacy Provides an overview of innovative security techniques which are being developed to ensure the guaranteed authenticity of transmitted, shared or stored data/information

This handbook provides a computational perspective on green computing and blockchain technologies. It presents not only how to identify challenges using a practical approach but also how to develop strategies for addressing industry challenges. Handbook of Green Computing and Blockchain Technologies takes a practical-oriented approach, including solved examples and highlights standardization, industry bodies, and initiatives. Case studies provide a deeper understanding of blockchain and are related to real-time scenarios. The handbook analyzes current research and development in green computing and blockchain analytics, studies existing related standards and technologies, and provides results on implementation, challenges, and issues in today's society. FEATURES Analyzes current research developments in green computing and blockchain analytics Provides an analysis of implementation challenges and solutions Offers innovations in the decentralization process for the application of blockchain in areas such as healthcare, government services, agriculture, supply chain, financial, ecommerce, and more Discusses the impact of this technology

on people's lives, the way they work and learn, and highlights standardization, industry bodies, and initiatives This handbook will benefit researchers, software developers, and undergraduate and postgraduate students in industrial systems, manufacturing, information technology, computer science, manufacturing, communications, and electrical engineering.

Blockchain for Healthcare Systems: Challenges, Privacy, and Securing of Data provides a detailed insight on how to reap the benefits of blockchain technology in healthcare, as the healthcare sector faces several challenges associated with privacy and security issues. It also provides in-depth knowledge regarding blockchain in healthcare and the underlying components. This book explores securing healthcare data using blockchain technology. It discusses challenges and solutions for blockchain technology in the healthcare sector and presents the digital transformation of the healthcare sector using different technologies. It covers the handling of healthcare data/medical records and managing the medical supply chain all using blockchain technology. The contents of this book are highly beneficial to educators, researchers, and others working in a similar domain.

This book constitutes the refereed proceedings of the 12th SIGSAND/PLAIS EuroSymposium 2019 held in Gdansk, Poland, on September 19, 2019. The objective of the EuroSymposium on Systems Analysis and Design is to promote and develop high quality research on all issues related to information systems (IS) and in particular in systems analysis and design (SAND). The 12 papers presented in this volume were carefully reviewed and selected from 32 submissions. They were organized in topical sections named: information systems in business; health informatics and life-long-learning; IT security; agile methods and software engineering.

This book presents the proceedings of the 2019 International Scientific and Technical Conference "Integrated Computer Technologies in Mechanical Engineering" – Synergetic Engineering (ICTM' 2019). The ICTM was established by the National Aerospace University "Kharkiv Aviation Institute" to bring together outstanding researchers and practitioners in the fields of information technology in the design and manufacture of engines, creation of rocket space systems, and aerospace engineering from around the globe all to share their knowledge and expertise. The ICTM'2019 conference was held in Kharkiv, Ukraine, on November 28–30, 2019. During the event, technical exchanges between the research communities took place in the form of keynote speeches, panel discussions, and special sessions. In addition, participants had the opportunity to forge new collaborations with their fellow researchers. ICTM'2019 received 172 submissions from various countries. This book features selected papers offering insights into the following topics: Information technology in the design and manufacture of engines; Information technology in the creation of rocket space systems; Aerospace engineering; Transport systems and logistics; Big data and data science; Nano-modeling; Artificial

intelligence and smart systems; Networks and communication; Cyber-physical system and IoE; Software Engineering and IT-infrastructure. The organizers of ICTM 2019 made great efforts to ensure the success of this conference. The authors would like to thank all the members of the ICTM'2019 Advisory Committee for their guidance and advice, the members of Program Committee and Organizing Committee, the referees for their time and effort in reviewing and soliciting the papers, and the authors for their contributions to the formation of a common intellectual environment for solving relevant scientific problems. Also, the authors are grateful to Springer, especially Janusz Kacprzyk and Thomas Ditzinger as the editors responsible for the series "Advances in Intelligent System and Computing" for their valuable support in publishing these selected papers.

This book constitutes the refereed proceedings of the 11th SIGSAND/PLAIS EuroSymposium 2018 held in Gdansk, Poland, on September 20, 2018. The objective of the EuroSymposium on Systems Analysis and Design is to promote and develop high quality research on all issues related to information systems (IS) and in particular in systems analysis and design (SAND). The 14 papers presented in this volume were carefully reviewed and selected from 36 submissions. They were organized in topical sections named: systems development and engineering; systems acceptance and usability; internet of things and big data; and healthcare IT.

Covers research in the area of systems analysis and design practices and methodologies.

This book constitutes the refereed proceedings of the SIGSAND/PLAIS EuroSymposium 2016 titled Information Systems: Development, Research, Applications, Education, held in Gdansk and Sopot, Poland, on September 29, 2016. The objective of this symposium is to promote and develop high-quality research on all issues related to systems analysis and design (SAND). It provides a forum for SAND researchers and practitioners in Europe and beyond to interact, collaborate, and develop their field. The 14 papers presented in this volume were carefully reviewed and selected from 34 submissions. They are organized in topical sections on information systems development, information systems management, and information systems learning.

The importance of proper geometric dimensioning and tolerancing as a means of expressing the designer's functional intent and controlling the inevitable geometric and dimensional variations of mechanical parts and assemblies, is becoming well recognized. The research efforts and innovations in the field of tolerancing design, the development of supporting tools, techniques and algorithms, and the significant advances in computing software and hardware all have contributed to its recognition as a viable area of serious scholarly contributions. The field of tolerancing design is successfully making the transition to maturity where deeper insights and sound theories are being developed to offer explanations, and reliable implementations are introduced to provide solutions. Machine designers realized very early that manufacturing processes do not produce the nominal dimensions of designed parts. The notion of associating a lower and an upper limit, referred to as tolerances, with each dimen sion was introduced. Tolerances were specified to ensure the proper function of mating features. Fits of mating features included clearances, location fits, and interference fits, with various sub-grades in each category assigned a tolerance value depending on the nominal size of the mating features. During the inspection process, a part is rejected if a dimension fell outside the

specified range. As the accuracy requirements in assemblies became tighter, designers had to consider other critical dimensions and allocate tolerances to them in order to ensure the assembly's functionality.

This book constitutes the proceedings of the 6th Euro Symposium on Systems Analysis and Design, SIGSAND/PLAIS 2013, held in Gda?sk, Poland, in September 2013. The objective of this symposium is to promote and develop high-quality research on all issues related to systems analysis and design (SAND). It provides a forum for SAND researchers and practitioners in Europe and beyond to interact, collaborate, and develop their field. The 8 papers were carefully reviewed and selected with an acceptance rate of 40% and reflect the current trends in systems analysis and design. The contributions are organized into topical sections on information systems development, information systems security and information systems learning.

Research in Systems Analysis and Design: Models and Methods4th SIGSAND/PLAIS EuroSymposium 2011, Gda?sk, Poland, September 29, 2011, Revised Selected PapersSpringer