# Studies in Computational Intelligence

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# Advances in ICT for Business, Industry and Public Sector

Springer

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# Preface

Information and Communication Technologies are widely used in business, industry, and public sector. They support core business, enable control of equipment, provide information or knowledge for decision makers, and they allow the creation/design of new software and hardware solutions. Ubiquitous Internet has forced the development of new services and it is still an inspiration to propose new tools, approaches, and paradigms.

The development of the information society (the knowledge era) is directly related to the growing importance of information. Large datasets processing give a possibility of obtaining relevant information and knowledge can be acquired from data. Thus, data processing, analyses, visualization are very important, practically essential for organizations, therefore decision makers.

Researchers' and business sector's interest in solutions for advanced processing and acquisition of information to be able to process knowledge. To this aim intelligent systems and software/hardware solutions are to be employed. High potential for Business ICT have, in particular, Business Intelligence, reasoning systems, knowledge management, advanced signal/data processing, text mining techniques (including processing data available on the web sites/services and content processing), and big data—including new analyzing and visualization algorithms.

This contributed volume is a result of many valuable discussions held at ABICT'13 (4th International Workshop on Advances in Business ICT) in Krakow, September 8–11, 2013.

The workshop focused on Advances in Business ICT approached from a multidisciplinary perspective. It provided an international forum for scientists/experts from academia and industry to discuss and exchange current results, applications, new ideas of ongoing research, and experience on all aspects of Business Intelligence and big data. ABICT has also been an opportunity to demonstrate different ideas and tools for developing and supporting organizational creativity, as well as advances in decision support systems.

This book is an interesting resource for researchers, analysts, and IT professionals including software designers. The book comprises 11 chapters. Authors

present research results on business analytics in organization, business processes modeling, problems with processing big data, nonlinear time structures, and nonlinear time ontology application, simulation profiling, signal processing (including change detection problems), text processing and risk analysis.

Maria Mach-Król
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Tomasz Pełech-Pilichowski

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