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Man-Machine Interactions 3

 Springer

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*The machine does not isolate man
from the great problems of nature
but plunges him more deeply into them.*

Antoine de Saint-Exupéry

Preface

This volume contains the proceedings of the 3rd International Conference on Man-Machine Interactions (ICMMI 2013) which was held at Brenna, Poland during October 22nd–25th, 2013. ICMMI Conferences are organized biennially since 2009. The first ICMMI Conference was dedicated to the memory of Adam Mrózek, distinguished scientist in the area of decision support systems in industrial applications. The event turned out to be such a success that it has been decided to treat it as the beginning of the cycle of conferences bringing together scientists interested in all aspects of theory and practice of Man-Machine Interactions. Since the beginning, the Conference provides an international forum for exchanging ideas, setting questions for discussion, and sharing the experience and knowledge among wide community of scientists.

Man-Machine Interaction is an interdisciplinary field of research. Broad range of topics covers many aspects of science focused on a human and machine in conjunction and many different subjects are involved to reach the long-term research objective of an intuitive, natural and multimodal way of interaction with machines. The authors with different background research area contributed to the success of this volume. ICMMI 2103 conference attracted 167 authors from 10 different countries across the world. The review process was conducted by the members of Programme Committee with help of external reviewers. Each paper was subjected to at least two independent reviews and many of them had three. Finally, 66 papers were selected for presentations. Here, we would like to express our gratitude to the PC members and reviewers for their work and critical comments.

This volume contains four invited and 66 high-quality reviewed papers divided into eleven topical sections, namely: human-computer interactions, robot control, embedded and navigation systems, bio data analysis and mining, biomedical signal processing, image and sound processing, decision support and expert systems, rough and fuzzy systems, pattern recognition, algorithms and optimization, computer networks and mobile technologies and data management systems.

Compilation of this volume has been made possible to the laudable efforts of the Institute of Informatics Silesian University of Technology, and the Institute of Informatics, Polish Academy of Sciences, Gliwice, Poland. We are also grateful to

the panel of keynote speakers: Bogdan Gabrys, Edwin R. Hancock, Alfred Inselberg and Petra Perner for agreeing to deliver keynote talks and for their invited papers. In addition the editors and authors of this volume extended the expression of gratitude to Janusz Kacprzyk, the editor of this series, Holger Schape, Thomas Ditzinger and other Springer staff for their support in making this volume possible. We also wish to express our thanks to the members of Organizing Committee for their endeavor in making this conference success.

In conclusion, the editors wish to express their hopes that this volume will not be just considered as merely reporting scientific and technical solutions, which has already been achieved, but also a valuable source of reference and inspiration for ongoing and future research on man-machine interactions leading to further improvements and enhancing quality of live.

October 2013

Aleksandra Gruca
Tadeusz Czachórski
Stanisław Kozielski

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