

Preface

These two volumes constitute the Proceedings of the 7th International Workshop on Soft Computing Applications, or SOFA 2016, which will be held on August 24–26, 2016, in Arad, Romania. This edition was organized by Aurel Vlaicu University of Arad, Romania, University of Belgrade, Serbia, in conjunction with Institute of Computer Science, Iasi Branch of the Romanian Academy, IEEE Romanian Section, Romanian Society of Control Engineering and Technical Informatics (SRAIT)—Arad Section, General Association of Engineers in Romania—Arad Section and BTM Resources Arad.

Soft computing concept was introduced by Lotfi Zadeh in 1991 and serves to highlight the emergence of computing methodologies in which the accent is on exploiting the tolerance for imprecision and uncertainty to achieve tractability, robustness, and low solution cost. Soft computing facilitates the use of fuzzy logic, neurocomputing, evolutionary computing and probabilistic computing in combination, leading to the concept of hybrid intelligent systems.

Combining of such intelligent systems' tools and a large number of applications can show the great potential of soft computing in all domains.

The volumes cover a broad spectrum of soft computing techniques, theoretical and practical applications find solutions for industrial world, economic, and medical problems.

The conference papers included in these proceedings, published post conference, were grouped into the following area of research:

- Methods and Applications in Electrical Engineering
- Knowledge-Based Technologies for Web Applications, Cloud Computing, Security Algorithms and Computer Networks
- Biomedical Applications
- Image, text and signal processing
- Machine Learning and Applications
- Business Process Management
- Fuzzy Applications, Theory and Fuzzy and Control
- Computational Intelligence in Education

- Soft Computing & Fuzzy Logic in Biometrics (SCFLB)
- Soft Computing Algorithms Applied in Economy, Industry and Communication Technology
- Modelling and Applications in Textiles
- Methods and Applications in Electrical Engineering

In SOFA 2016, we had six eminent keynote speakers: Professor Michio Sugeno (Japan), Professor Anna Esposito (Italy), Professor Mika Sato-Ilic (Japan), Professor Valeriu Beiu (Romania), Professor Salil Bose (USA), Professor Rajeeb Dey (India) and an interesting roundtable of Professor József Dombi (Hungary). Their summaries talks are included in this book.

We especially thank the Honorary Chair of SOFA 2016 Prof. Lotfi A. Zadeh who encouraged and motivated us, like to all the other SOFA editions.

We are thankful to all the authors that have submitted papers for keeping the quality of the SOFA 2016 conference at high levels. The editors of this book would like to acknowledge all the authors for their contributions and also the reviewers. We have received an invaluable help from the members of the International Program Committee and the chairs responsible for different aspects of the workshop. We appreciate also the role of special sessions organizers. Thanks to all of them we had been able to collect many papers of interesting topics, and during the workshop, we had very interesting presentations and stimulating discussions.

For their help with organizational issues of all SOFA editions we express our thanks to TRIVENT Company, Mónika Jetzin and Teodora Artimon for having customized the software Conference Manager, registration of conference participants and all local arrangements.

Our special thanks go to Janus Kacprzyk (Editor in Chief, Springer, Advances in Intelligent Systems and Computing Series) for the opportunity to organize this guest edited volume.

We are grateful to Springer, especially to Dr. Thomas Ditzinger (Senior Editor, Applied Sciences & Engineering Springer-Verlag) for the excellent collaboration, patience, and help during the evolvement of this volume.

We hope that the volumes will provide useful information to professors, researchers, and graduated students in the area of soft computing techniques and applications, and all will find this collection of papers inspiring, informative, and useful. We also hope to see you at a future SOFA event.

Valentina Emilia Balas
Lakhmi C. Jain
Marius Mircea Balas

Soft Computing Applications

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Balas, V.E.; Jain, L.C.; Balas, M.M. (Eds.)

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