

Lecture Notes in Networks and Systems 840

Hushairi Zen
Naga M. Dasari
Y. Madhavee Latha
S. Srinivasa Rao *Editors*

Soft Computing and Signal Processing

Proceedings of 6th ICSCSP 2023,
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Y. Madhavee Latha · S. Srinivasa Rao
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Soft Computing and Signal Processing

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Conference Theme

The International Conference on Soft Computing and Signal Processing is planned to create awareness and provide a common platform for the professionals, academicians and researchers working in the area of Soft Computing and Signal Processing to analyze the state-of-the-art developments, innovations and future trends and thereby contribute to the much-needed dissemination of latest developments and advances in these fields. It is a well-known fact that research plays a vital role in the sphere of teaching and academics.

In this regard, Soft Computing encompasses topics such as Computational Intelligence, Deep Learning, Optimization Techniques, Evolutionary Algorithms, Intelligent E-Learning Systems, Soft Sets, Rough Sets, Fuzzy Logic, Neural Networks, Genetic Algorithms and Machine Learning and Signal Processing and also encompasses emerging topics such as Communication Engineering, Information Theory and Networks, Electronics Engineering and Microelectronics, Signal, Image and Speech Processing, Wireless and Mobile Communication, Circuits and Systems, Energy Systems, Power Electronics and Electrical Machines, Electro-optical Engineering, Instrumentation Engineering, Avionics Engineering, Control Systems, Internet of Things and Cybersecurity, Biomedical Devices, MEMS and NEMS, Radar Signal Processing and VLSI Signal Processing which are all state-of-the-art topics having great deal of research potential which contribute toward promotion of peaceful and inclusive societies for sustainable development.

The conference provides a platform for interacting and exchange of ideas, experience and expertise in the current focus of global research, recent developments, challenges and emerging trends in the above-mentioned fields.

Finally, the conference is going to be an intellectual arena which encompasses ability for developing the needs of the present without compromising the ability of future generations to meet their own needs. It also helps to exchange and exhibit mutual respect and understanding of ideas, philosophical principles, cognitive styles and mind-sets as well as acts of integrity and purposeful personal reflection.

The submitted papers are expected to cover the state-of-the-art technologies, product implementation, ongoing research as well as application issues which will take care in promoting peaceful and inclusive societies for sustainable development.

Preface

The International Conference on Soft Computing and Signal Processing (ICSCSP-2023) was successfully organized by Malla Reddy College of Engineering and Technology, an UGC Autonomous Institution, during June 23–24, 2023, at Hyderabad. The objective of this conference was to provide opportunities for the researchers, academicians and industry persons to interact and exchange the ideas, experience and gain expertise in the cutting-edge technologies pertaining to soft computing and signal processing. Research papers in the above-mentioned technology areas were received and subjected to a rigorous peer-review process with the help of program committee members and external reviewers. The ICSCSP-2023 received a total of 243 papers, each paper was reviewed by more than two reviewers, and finally 55 papers were accepted for publication in Springer LNNS series.

Our sincere thanks go to Dr. Aninda Bose, Senior Editor, Springer Publications, India, and Dr. Suresh Chandra Satapathy, Prof. and Dean, R&D, KIIT, for extending their support and cooperation.

We would like to express our gratitude to all session chairs, viz., Dr. Jiacun Wang, Monmouth University, USA; Dr. Ramamurthy Garimella, Mahindra University, Hyderabad; Dr. Divya Midhun Chakravarthy, Lincoln University College, Malaysia; Dr. Naga Mallikarjuna Rao Dasari, Federation University, Australia; Dr. Samrat Lagnajeet Sabat, University of Hyderabad; Dr. Bharat Gupta, NIT, Patna; Dr. Mukil Alagirisamy, Lincoln University College, Malaysia; and Dr. M. Ramakrishna Murthy, ANITS, Visakhapatnam, for extending their support and cooperation.

We are indebted to the program committee members and external reviewers who have produced critical reviews in a short time. We would like to express our special gratitude to publication chair Dr. Suresh Chandra Satapathy, KIIT, Bhubaneswar, for his valuable support and encouragement till the successful conclusion of the conference.

We express our heartfelt thanks to our Chairman, Sri. Ch. Malla Reddy Garu, Chief Patron, Founder Chairman, MRGI; Patrons Sri. Ch. Mahendar Reddy, Secretary, MRGI; Sri. Ch. Bhadra Reddy, President, MRGI; Dr. V. S. K. Reddy, Vice Chancellor MRU; Dr. S. Srinivasa Rao, Principal and Convener; Co-conveners Dr. P. H. V. Sesha

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We would also like thank Organizing Secretaries Dr. K. Mallikarjuna Lingam, HOD, ECE; Dr. D. Sujatha HOD (CI); Dr. G. Sharada HOD (IT); Dr. S. Shanthi, HOD (CSE); and Dr. M. V. Kamal, HOD (ET) for their valuable contribution. Our sincere thanks go to all the coordinators, Organizing Committee, and other committee members for their commendable contribution in the successful conduct of the conference.

Last, but certainly not least, our special thanks go to all the authors for their applaudable technical contributions which have made our proceedings rich and exemplary.

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