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Bijaya Ketan Panigrahi (Eds.)

Swarm, Evolutionary, and Memetic Computing and Fuzzy and Neural Computing

7th International Conference, SEMCCO 2019
and 5th International Conference, FANCCO 2019
Maribor, Slovenia, July 10–12, 2019
Revised Selected Papers

Springer

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Preface

This volume contains the papers presented at SEMCCO 2019 and FANCCO 2019: Swarm, Evolutionary and Memetic Computing Conference (SEMCCO 2019) and Fuzzy And Neural Computing Conference (FANCCO 2019), held during July 10–12, 2019, in Maribor, Slovenia. SEMCCO 2019 was the 7th international conference of this series, where SEMCCO 2010 was successfully organized at SRM University, Chennai, SEMCCO 2011 at ANITS, Visakhpatnam, SEMCCO 2012 at SOA University, Bhubaneswar, SEMCCO 2013 at SRM University, Chennai, SEMCCO 2014 at SOA University, Bhubaneswar, and SEMCCO 2015 in Hyderabad, India. FANCCO 2019 was the 5th international conference of this series, collocated and co-organized with SEMCCO. These conferences aim at bringing together researchers from academia and industry to report and review the latest progresses in cutting-edge research, focusing on Swarm, Evolutionary, Memetic, Fuzzy, and Neural computing to explore new application areas and to design new bio-inspired algorithms for solving specific, hard optimization problems, and finally to create awareness of these domains to a wider audience of practitioners. Therefore, researchers are encouraged to submit their contributions in both theoretical and practical aspects. This year, the General Chair of the conference was Aleš Zamuda, the General Co-chairs were Swagatam Das (also Program Chair), Ponnuthurai Nagaratnam Suganthan (also Steering Committe Chair), and Bijaya Ketan Panigrahi (also Publication Chair).

There were 31 submissions. Each submission underwent a single-blind review by at least 3, and on the average 3.0, Program Committee members. The committee decided to accept 18 papers for this post-conference proceedings. The conference program also included an invited talk by Ponnuthurai Nagaratnam Suganthan from Nanyang Technological University on "Differential Evolution for Numerical Optimization," an invited talk by Benjamin Doerr from the Max-Planck-Institut für Informatik on "From Theory to Better Algorithms," and a tutorial by Aleš Zamuda from the University of Maribor on "Differential Evolution Applicability." The conference included 5 sessions with paper presentations, a benchmarking panel discussion chaired by Aleš Zamuda, and was combined with 4 social events. The conference also included competitions on numerical optimization with entries for the 100-Digit Challenge.

We take this opportunity to thank the authors of all submitted papers for their hard work, adherence to the deadlines, and patience with the review and publishing process. As the quality of a refereed volume depends largely on the expertise and dedication of the reviewers, we thank the Program Commitee members who produced excellent reviews. We would also like to thank our sponsors and acknowledge Springer, the University of Maribor, IEEE Slovenia, COST, and EasyChair for their support of this conference. We thank Management and Administrations (faculty colleagues and administrative personnel) of the University of Maribor at the Faculty of Electrical Engineering and Computer Science. We would also like to thank the participants of this conference. Finally, we would like to thank all the volunteers for their tireless efforts in

meeting the deadlines and arranging every detail to make sure that the conference ran smoothly. We hope that the readers of these proceedings find the papers inspiring and enjoyable.

November 2019

Aleš Zamuda
Swagatam Das
Ponnuthurai Nagaratnam Suganthan
Bijaya Ketan Panigrahi

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