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Preface

This volume constitutes the proceedings of the International Symposium on Swarm and Evolutionary Computation organized as part of the 11th International Conference on Artificial Intelligence and Soft Computing, ICAISC 2012, held in Zakopane, Poland from April 29 to May 3, 2012. The symposium consisted of the Symposium on Swarm Intelligence and Differential Evolution (SIDE 2012) and the Symposium on Evolutionary Computation. Swarm intelligence (SI) is a computational intelligence technique which mimics and makes use of collective behavior (e.g., fish, birds, bees, ants, bacteria etc.) for solving search and optimization problems. The resulting algorithms are thus population-based systems of simple individuals interacting with one another and with their environment. Differential evolution (DE) is a special example of an optimizer since it shares some features with SI, mainly in the interaction amongst particles and selection scheme, but can also be considered as an evolutionary algorithm (EA). This symposium gathered new theoretical and implementation results, applications, reviews, and comparative studies. Special emphasis was placed on those studies which attempt to explain the working principles of the algorithms. I would like to thank the SIDE Committees, especially Ponnuthurai N. Suganthan, for organizing this successful event. The volume is divided into two parts: proceedings of the 2012 Symposium on Swarm Intelligence and Differential Evolution and the Symposium on Evolutionary Computation. This edition of the ICAISC also hosted the 4th International Workshop on Engineering Knowledge and Semantic Systems (IWEKSS 2012). The whole conference (ICAISC, SIDE and IWEKSS) attracted a total of 483 submissions from 48 countries and after the review process 212 papers were accepted for publication. I would like to thank our participants, invited speakers and reviewers of the papers for their scientific and personal contribution to the conference. Several reviewers were very helpful in reviewing the papers and are listed herein.

Finally, I thank my co-workers Łukasz Bartczuk, Agnieszka Cpałka, Piotr Dziwiński, Marcin Gabryel, Marcin Korytkowski and the conference secretary Rafał Scherer, for their enormous efforts to make the conference a very successful event. Moreover, I would like to acknowledge the work of Marcin Korytkowski, who designed the Internet submission system.

April 2012 Leszek Rutkowski

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