

Lecture Notes in Artificial Intelligence

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Preface

This volume constitutes the proceedings of the 10th International Conference on Artificial Intelligence and Soft Computing, ICAISC 2010, held in Zakopane, Poland during June 13-17, 2010. The conference was organized by the Polish Neural Network Society in cooperation with the Academy of Management in Łódź (SWSPiZ), the Department of Computer Engineering at the Czestochowa University of Technology, and the IEEE Computational Intelligence Society, Poland Chapter. The previous conferences took place in Kule (1994), Szczyrk (1996), Kule (1997) and Zakopane (1999, 2000, 2002, 2004, 2006, 2008) and attracted a large number of papers and internationally recognized speakers: Lotfi A. Zadeh, Shun-ichi Amari, Daniel Amit, Piero P. Bonissone, Zdzislaw Bubnicki, Andrzej Cichocki, Wlodzislaw Duch, Pablo A. Estévez, Jerzy Grzymala-Busse, Kaoru Hirota, Janusz Kacprzyk, Laszlo T. Koczy, Soo-Young Lee, Robert Marks, Evangelia Micheli-Tzanakou, Erkki Oja, Witold Pedrycz, Sarunas Raudys, Enrique Ruspini, Jorg Siekman, Roman Slowinski, Ryszard Tadeusiewicz, Shiro Usui, Ronald Y. Yager, Syozo Yasui and Jacek Zurada. The aim of this conference is to build a bridge between traditional artificial intelligence techniques and recently developed soft computing techniques. It was pointed out by Lotfi A. Zadeh that “Soft Computing (SC) is a coalition of methodologies which are oriented toward the conception and design of information/intelligent systems. The principal members of the coalition are: fuzzy logic (FL), neurocomputing (NC), evolutionary computing (EC), probabilistic computing (PC), chaotic computing (CC), and machine learning (ML). The constituent methodologies of SC are, for the most part, complementary and synergistic rather than competitive.” This volume presents both traditional artificial intelligence methods and soft computing techniques. Our goal is to bring together scientists representing both traditional artificial intelligence approaches and soft computing techniques. This volume is divided into four parts:

- Fuzzy Systems and Their Applications
- Data Mining, Classification and Forecasting
- Image and Speech Analysis
- Bioinformatics and Medical Applications

The conference attracted a total of 385 submissions from 44 countries and after the review process, 169 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 later.

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 success-

ful event. Moreover, I would appreciate the work of Marcin Korytkowski, who designed the Internet submission system.

June 2010

Leszek Rutkowski

Organization

ICAISC 2010 was organized by the Polish Neural Network Society in cooperation with the Academy of Management in Łódź (SWSPiZ), the Department of Computer Engineering at Częstochowa University of Technology, and the IEEE Computational Intelligence Society, Poland Chapter.

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