

Preface

This volume constitutes the proceedings of the 14th International Conference on Artificial Intelligence and Soft Computing, ICAISC 2015, held in Zakopane, Poland, during June 14–18, 2015. The conference was organized by the Polish Neural Network Society in cooperation with the University of Social Sciences in Łódź, the Institute of Computational Intelligence at the Częstochowa University of Technology, and the IEEE Computational Intelligence Society, Poland Chapter. Previous conferences took place in Kule (1994), Szczyrk (1996), Kule (1997), and Zakopane (1999, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2013, and 2014) and attracted a large number of papers and internationally recognized speakers: Lotfi A. Zadeh, Hojjat Adeli, Rafal Angryk, Igor Aizenberg, Shun-ichi Amari, Daniel Amit, Piero P. Bonissone, Jim Bezdek, Zdzisław Bubnicki, Andrzej Cichocki, Włodzisław Duch, Pablo A. Estévez, Jerzy Grzymala-Busse, Martin Hagan, Yoichi Hayashi, Akira Hirose, Kaoru Hirota, Hisao Ishibuchi, Er Meng Joo, Janusz Kacprzyk, Jim Keller, Laszlo T. Koczy, Adam Krzyzak, Soo-Young Lee, Derong Liu, Robert Marks, Evangelia Micheli-Tzanakou, Kaisa Miettinen, Henning Müller, Ngoc Thanh Nguyen, Erkki Oja, Witold Pedrycz, Marios M. Polycarpou, José C. Príncipe, Jagath C. Rajapakse, Šarunas Raudys, Enrique Ruspini, Jörg Siekmann, Roman Słowiński, Igor Spiridonov, Boris Stilman, Ponnuthurai Nagaratnam Suganthan, Ryszard Tadeusiewicz, Ah-Hwee Tan, Shiro Usui, Fei-Yue Wang, Jun Wang, Bogdan M. Wilamowski, Ronald Y. Yager, Syozo Yasui, Gary Yen, and Jacek Zurada. The aim of this conference is to build a bridge between traditional artificial intelligence techniques and so-called 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." These proceedings present both traditional artificial intelligence methods and soft computing techniques. Our goal is to bring together scientists representing both areas of research. This volume is divided into six parts:

- Data Mining,
- Bioinformatics, Biometrics and Medical Applications,
- Concurrent and Parallel Processing,
- Agent Systems, Robotics and Control,
- Artificial Intelligence in Modeling and Simulation,
- Various Problems of Artificial Intelligence.

The conference has attracted a total of 322 submissions from 39 countries and after the review process, 142 papers have been accepted for publication. The ICAISC 2015 hosted the Workshop: Large-Scale Visual Recognition and Machine Learning organized by

- Marcin Korytkowski, Częstochowa University of Technology, Poland,
- Rafał Scherer, Częstochowa University of Technology, Poland,
- Sviatoslav Voloshynovskiy, University of Geneva, Switzerland.

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