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Transactions on Computational Collective Intelligence IV

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Preface

Welcome to the fourth volume of *Transactions on Computational Collective Intelligence* (TCCI). It is the second issue in 2011 of this Springer journal which is devoted to research in computer-based methods of computational collective intelligence (CCI) and their applications in a wide range of fields such as group decision making, Semantic Web, social networks and multi-agent systems. TCCI strives to cover new methodological, theoretical and practical aspects of CCI understood as the form of intelligence that emerges from the collaboration and competition of many individuals (artificial and/or natural).

This issue includes six papers divided into two parts. The first part contains Ireneusz Czarnowski's paper entitled "Distributed Learning with Data Reduction," which consists of 120 pages and has a monograph character. The second part consists of five regular papers selected from high-quality submissions addressing advances in the foundations and applications of CCI. The first entitled "Data Clustering Based on an Efficient Hybrid of Kharmonic Means, PSO and GA" by Malihe Danesh et al., deals with new PSO-based algorithms for clustering problem. The second paper, "A Study of Probability Collectives Multi-agent Systems on Optimization and Robustness" by Chien-Feng Huang and Bao Rong Chang, presents an interesting study on optimization and robustness of probability collectives multi-agent systems. In the third paper, titled "Inference Rules in Multi-agents' Temporal Logics," Vladimir Rybakov presents a framework for computation inference rules valid in agents' temporal logics. The next paper, "Selecting ISPs" by Andrzej Siemiński contains the description of the analysis of several properties of the network connection that is offered by Internet service providers. The last paper titled "AbSM—Agent-Based Session Mobility" authored by Günther Höbling, Wolfgang Pfnür, and Harald Kosch presents a novel system for supporting session mobility that enables the user to create a relation between the session and himself.

TCCI is a double-blind refereed and authoritative reference dealing with the working potential of CCI methodologies and applications, as well as emerging issues of interest to academics and practitioners. The research area of CCI has been growing significantly in recent years and we are very thankful to everyone within the CCI research community who has supported the Transactions on Computational Collective Intelligence and its affiliated events including the International Conferences on Computational Collective Intelligence: Technologies and Applications (ICCCI). The first ICCCI event was held in Wrocław, Poland, in October 2009. ICCCI 2010 was held in Taiwan in November 2010 and ICCCI 2011 will take place in Gdynia, Poland, in September 2011. We are very pleased that TCCI and the ICCCI conferences are strongly cemented as high-quality platforms for presenting and exchanging the most important and significant advances in CCI research and development.

It is our pleasure to announce the creation of the new Technical Committee on Computational Collective Intelligence within the Systems, Man and Cybernetics Society (SMC) of IEEE.

We would like to thank all the authors for their contributions to TCCI. This issue would not have been possible without the great efforts of the editorial board and many anonymously acting reviewers. We would like to express our sincere thanks to all of them. Finally, we would also like to express our gratitude to the LNCS editorial staff of Springer, in particular Alfred Hofmann, Ursula Barth, Peter Strasser and their team, who have supported the TCCI journal.

April 2011

Ngoc Thanh Nguyen

Transactions on Computational Collective Intelligence

This Springer journal focuses on research in applications of the computer-based methods of computational collective intelligence (CCI) and their applications in a wide range of fields such as the Semantic Web, social networks and multi-agent systems. It aims to provide a forum for the presentation of scientific research and technological achievements accomplished by the international community.

The topics addressed by this journal include all solutions of real-life problems for which it is necessary to use computational collective intelligence technologies to achieve effective results. The emphasis of the papers published is on novel and original research and technological advancements. Special features on specific topics are welcome.

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