Transactions on Computational Collective Intelligence XXII

Preface

It is my pleasure to present to you the XXII volume of LNCS *Transactions on Computational Collective Intelligence*. This volume inaugurates year 2016, the sixth year of TCCI activities. In 22 issues we have published 222 high-quality papers. This issue contains 11 papers.

The first paper "Pairwise Comparisons Rating Scale Paradox" by Waldemar W. Koczkodaj is devoted to the solution based on normalization of the paradox of unprocessed rating scale data. The author shows that the pairwise comparisons method is the most amazing and universal approach to assessments and decision-making problems.

The second paper entitled "On Achieving History-Based Move Ordering in Adversarial Board Games Using Adaptive Data Structures" by Spencer Polk and B. John Oommen concerns the problem of enhancing the well-known alpha–beta search technique for intelligent game playing. The authors show that, while using lightweight, efficient ranking techniques associated with an adaptive data structure, the mechanism they proposed is able to obtain substantial gains in tree pruning in both the two-player and multi-player cases, in a variety of games.

In the third paper, "Identification of Possible Attack Attempts Against Web Applications Utilizing Collective Assessment of Suspicious Requests," Marek Zachara presents a new method for detecting attacks against Web applications, in which cooperating systems analyze incoming requests, identify potential threats, and present them to other peers. The method was tested using data from seven different Web servers, consisting of over three million recorded requests.

The fourth paper, "A Grey Approach to Online Social Networks Analysis" by Camelia Delcea et al., presents a model for analyzing whether people from a randomly chosen sample are comparing themselves with the ones in their own network by considering the posts their friends are making on Facebook and whether there is any dependency between the social comparison orientation and the appearance of a negative feeling.

The fifth paper entitled "ReproTizer: A Fully Implemented Software Requirements Prioritization Tool" by Philip Achimugu et al. presents a software named ReproTizer (Requirements Prioritizer), which serves to engender real-time prioritization of software requirements. ReproTizer consists of a weight scale that gives project stakeholders the ability to perceive the influence the different requirements weights may have on the final results.

In the sixth paper, "A Consensus-Based Method for Solving Concept-Level Conict in Ontology Integration," Trung Van Nguyen and Hanh Huu Hoang present a novel

method for finding the consensus in ontology integration at the concept level. Their approach is based on the consensus theory and distance functions between attribute values, which gives quite interesting results.

The next paper, "Enhancing Collaborative Filtering Using Implicit Relations in Data," by Manuel Pozo et al. presents a recommender system that relies on distributed recommendation techniques and implicit relations in data. The authors extends matrix factorization techniques by adding implicit relations in an independent layer. Owing to this, they have achieved good results of recommendation process.

In the eighth paper entitled "Semantic Web-Based Social Media Analysis," Liviu-Adrian Cotfas et al. propose a novel semantic social media analysis platform, which is able to properly emphasize users' complex feelings such as happiness, affection, surprise, anger, or sadness.

In the ninth paper, "Web Projects Evaluation Using the Method of Significant Website Assessment Criteria Detection," Paweł Ziemba et al. analyze the applicability of feature selection methods in the task of selecting website assessment criteria to which weights are assigned. The authors tested the applicability of the chosen methods against the approach in which the weightings of website assessment criteria are defined by users. They propose a selection procedure for significant choice criteria and reveal undisclosed user preferences based on the website quality assessment models.

In the tenth paper entitled "Dynamic Database by Inconsistency and Morphogenetic Computing," Xiaolin Xu et al. present a formal description of database transformations in a way to classify the database or to generate a new database from the previously known database. Transformation can be isomorphic or non-isomorphic. Owing to this, the authors have proved that big data can reduce its complexity and be controlled in a better way by its homotopic parts.

The last paper, "A Method for Size and Shape Estimation in Visual Inspection for Grain Quality Control in the Rice Identification Collaborative Environment Multi-agent System," authored by Marcin Hernes et al. presents a method of estimating the size and shape of grain cereals using visual quality analysis. The authors implemented this method in a multi-agent system. They show that using this method should improve the statistical quality of the rice selection and should enable the identification of species/varieties of cereals and determination of the percentage of the grains that do not meet quality standards.

I would like to thank all the authors for their valuable contributions to this issue and all the reviewers for their opinions, which helped maintain the high quality of the papers. My special thanks go to the team at Springer, who helps publish TCCI issues in due time and in good order.

January 2016 Ngoc Thanh Nguyen

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