Editorial

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Dear Readers,

Welcome to the second issue of the *IJCIStudies*!

This issue follows the first issue published a few months ago. We decided to make this second issue in order to allow our readers to enjoy all the valuable contributions sent by the members of the Editorial Board for helping us in starting this new journal.

It is worth to remember that with the *International Journal of Computational Intelligence Studies*, we aim to provide a reference channel for disseminating all experimental, theoretical and application aspects of computational intelligence (CI). Over the last years CI in its various forms has emerged as one of the major topics in the scientific community and many CI techniques have been successfully applied to solve

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problems in a wide variety of fields such as biometrics, medical diagnosis, signal processing, and so on.

The primary objective of *IJCIStudies* is to provide an international and qualified reference point for all researchers engaged in new developments of CI. *IJCIStudies* is intended to serve and support scientists, professionals, entrepreneurs, government employees, policy and decision makers, educators, students and all people who are working in this scientific field or who are interested in considering and using CI techniques for their specific applications.

In this second issue, four feature articles address emerging research topics within the fields of CI by leaders in the scientific community.

The first article by Tomoko Kojiri, Akira Komedani, and Toyohide Watanabe, aims to estimate focusing target of the self-learner for the purpose of providing appropriate personal learning information automatically that enforces self-learner's knowledge acquisition. In order to perform the above estimation, the solution network, which represents answering steps of exercise and easiness of deriving them was introduced. Then, the calculation method of understanding the states of other learner in answering steps by using the solution network is proposed. By comparing the calculated understanding states of other learners with that of the learner, the learner's focusing target is determined. The experimental result showed that the proposed system could detect the correct focusing targets of learners who could not derive the answer by themselves and needed other learners' advices.

The second article by Miroslav Karny, Tatiana V. Guy, Antonella Bodini and Fabrizio Ruggeri addresses a merging problem arising in multiple participant decision making (DM). This paper presents a fully scalable cooperation model with individual participants being Bayesian decision makers who use fully probabilistic design of the optimal decision strategy. This methodology is based on a flat structure of cooperation, where each participant interacts with several 'neighbours'. The cooperation consists in providing probabilistic distributions a participant uses for its DM. The group DM is determined by a way of exploitation of the offered non-standard (probabilistic) fragmental information pieces. In particular a systematic procedure has been proposed by formulating and solving the exploitation problem in a Bayesian way.

The third paper by Dario Malchiodi aims to analyse the phenomenon of accuracy degradation in the samples given as input to support vector machine (SVM) classification algorithms. In this work the effect of accuracy degradation on the performance of the learnt classifiers is investigated and compared with theoretical results. In particular, it has been shown how a family of SVM classification algorithms enhanced in order to deal with quality measures on the available data handles accuracy degradation better than the classical SVM approaches to classification.

Finally, the fourth paper by Elisabeth Rakus-Andersson is a theoretical work that makes a contribution in fuzzy probability theory by proposing a probability of a continuous fuzzy event in the form of the continuous fuzzy set. The continuous fuzzy probability set is an extension of Yager's discrete probability assumed for discrete events. Discrete events have been replaced by continuous fuzzy numbers, since operations on such numbers are essentially simplified. Hence, fuzzy probabilities of continuous fuzzy events should also be continuous as a natural mathematical consequence of reasoning. Instead of the normal distribution, characteristic of biological features, another distribution to the model can be introduced in accordance with its character.

As this journal is a collective effort of all the Editorial Board members, the composition of which reflects the diverse topics in CI, we would like to take this opportunity to thank each and every one of them for their valuable cooperation. In particular, we are greatly indebted to Professor Lakhmi C. Jain for stimulating and encouraging the proposal of a new journal in the artificial intelligence arena.

All papers submitted to the *IJCIStudies* undergo a comprehensive review process under the direction of a member of our Editorial Board. Each paper receives at least three reviews, based on which the Editorial Board member makes a recommendation. The Editorial Board members ensure all papers receive fair and in-depth reviews before any decision is made. These decisions are reviewed by the Editor-in-Chief.

We hope this new publication will be useful to each of you and we are looking forward to hearing your comments, criticisms and suggestions to continuously enhance it and serve you better. You are also invited to contribute to the journal according to your interests and expertise.

Enjoy reading this second issue and stay with us!