

# Preface

This book comprises the proceedings of the First International Conference on Computational Intelligence (ICCI 2015) held during December 10–11, 2015 at Birla Institute of Technology, Mesra, Ranchi, India. ICCI 2015 was an international gathering for the researchers working on all aspects of computational intelligence and provided a high-level academic forum for the participants to disseminate their new research findings in the emerging areas of research. It also created a stimulating environment for the participants to interact and exchange information on future challenges and opportunities in the field of computational intelligence.

The definition of computational intelligence was introduced by Bezdek (1994) as: a system is called computationally intelligent if it deals with low-level data such as numerical data, has a pattern-recognition component and does not use knowledge in the artificial intelligence sense. Additionally, Bezdek and Marks (1993) clearly mentioned that computational intelligence should be based on soft computing methods. And the principal constituents of soft computing (SC) are fuzzy logic (FL), feural computing (NC), evolutionary computation (EC) machine learning (ML), and probabilistic reasoning (PR). In this book we targeted to cover the recent trends, developments and future possibilities of these soft computing techniques. Additionally, we also cover the bio-inspired computing techniques, which have become widely popular in recent times, in this book.

Computational intelligence has a rational theoretical part as well as an experimental wing. In these proceedings we try to balance theory and experiments by selecting papers from both the new theoretical findings in different concepts of computational intelligence as well as the application papers which are full of experiments for exploring new possibilities where the computational intelligence technique are superior.

The book is divided into seven parts, namely, Fuzzy Logic, Artificial Neural Network, Genetic Algorithm and Other Bio-inspired Computing, Applications in Cloud Computing, Applications in Image Processing, Applications in Security, and Other Applications of Computational Intelligence.

ICCI 2015 received 121 submissions from different countries in the world. Each submission was reviewed by at least two reviewers, and on average 2.4 reviewers per paper. Based on the rigorous reviews by the reviewers, 41 high-quality papers were selected for publication with an acceptance rate of 33.88 %.

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