Preface

Intelligent Computing Systems make use of computational methodologies that mimic nature-inspired processes to address real-world problems of high complexity for which exact mathematical solutions, based on physical and statistical modelling, are intractable. Common intelligent computational methodologies include artificial neural networks, evolutionary computation, genetic algorithms, artificial immune systems, fuzzy logic, swarm intelligence, artificial life, virtual worlds and hybrid methodologies based on combinations of the previous.

Intelligent Computing Systems have appeared in most modern scientific disciplines, including engineering, natural, computer and information sciences, economics, business, commerce, environment, health care and life sciences.

The book at hand is an attempt to explore emerging scientific and technological areas in which Intelligent Computing Systems seem to provide efficient solutions and, thus, may play a role in the years to come.

The book includes an editorial (Chap. "Intelligent Computing Systems") and an additional fifteen (15) chapters, covering such application areas of Intelligent Computing Systems as government, business and communities, smart cities, intelligent energy systems and environmental monitoring, Intelligent Computing Systems incorporated in equipment and advanced theoretical tools for processing data. All chapters in the book were invited from authors who work in the corresponding area of Intelligent Computing Systems and are recognized for their research contributions.

This research book is directed to professors, researchers, application engineers and students of all disciplines. We hope that they all will find it useful in their works and researches.

We are grateful to the authors and the reviewers for their excellent contributions and visionary ideas. We are also thankful to Springer for agreeing to publish this book. Last but not least, we are grateful to the Springer staff for their excellent work in producing this book.

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