

Preface

Multidisciplinary Approaches to Neural Computing belongs to a book series dedicated to recent advances in computational and theoretical issues of artificial intelligence methods. In this volume, particular attention is given to the dynamics of signal exchanges and the role played by artificial neural networks in giving meanings to aspects of information processing and social information processing in order to approximate noncomputable functions in the Turing exception of the term. The content of the book is organized in sections and each edition affords and discusses new ANN topics on the basis of their contributions in integrating algorithms and procedures for the processing of dynamic signals, in anticipation of the implementation of intelligent avatars, interactive dialog systems, and reliable complex autonomous systems for facilitation learning, decision making, aging, and improve the common well-being.

Each edition of the book is related to a long running International Conference, WIRN (International Workshop on Neural Networks, currently at the 28th edition). After the conference, the topics of major interest are selected and researchers proposing these topics are invited to contribute to the book.

The current edition is composed of the following topics:

1. Introduction
2. Algorithms
3. ANN Applications
4. Industrial Applications of Computational Intelligence Approaches
5. Social and Biometric Data for Applications in Human-Machine Interactions

Given the multidisciplinary nature of the book, scientific contributions are from computer science, physics, psychology, statistics, mathematics, electrical engineering, and communication science. The contributors to this volume are leading authorities in their respective fields. We are grateful to them for accepting our invitation and making (through their participation) the book a worthwhile effort. We would like to thank the Springer project coordinator for books production Mr. **Ayyasamy Gowrishankar**, the Springer executive editor Dr. **Thomas Ditzinger**, and the editor assistant Mr. **Holger Schaepe**, for their outstanding

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