COMPUTATIONAL INTELLIGENCE
Imitating Life

Edited by

Jacek M. Zurada
University of Louisville

Robert J. Marks II
University of Washington

Charles J. Robinson
University of Pittsburgh

IEEE Neural Networks Council, Sponsor
The Institute of Electrical and Electronics Engineers, Inc., New York
Preface

To our knowledge, the publication of this book marks the first time the components of Computational Intelligence have been fused in a single volume. This book has its origins at the 1994 IEEE World Congress on Computational Intelligence (WCCI) held in the summer at the Walt Disney Sheraton Dolphin Hotel in Orlando. The WCCI, for the first time, brought together in time and space, major conferences on neural networks, fuzzy systems, and evolutionary programming. A special plenary symposium, addressing emerging issues in computational intelligence, was conceived as glue to provide continuity among the three conferences. The contributions to the symposium were thought to be so outstanding, that an archival volume of the contributions was felt appropriate. The result is this book.

Acknowledgment

Originally, the World Congress on Computational Intelligence had “Intelligent Systems” in place of “Computational Intelligence” (CI) in its title [1]. Recognizing that Intelligent Systems had a specific meaning in the AI community — a meaning not consistent with the contents of the Congress — James C. Bezdek, author of the first paper in this volume, suggested CI. [The term, apparently first coined by Gordon McCalla and Nick Cercone, has been used as a title for another conference series and the journal Computational Intelligence (Blackwell)]. CI is an apt description of the topical union of the three component conferences that comprise WCCI.

Significant input into the contents of this volume was provided by the three conference Chairs—Piero P. Bonissone of The Third IEEE International Conference on Fuzzy Systems, Zbigniew Michalewicz of The IEEE Conference on Evolutionary Computation, and Steven K. Rogers of IEEE International Conference on Neural Networks. The support of the IEEE Neural Networks Council is appreciated. Stamatios Kartalopoulos, Vice President of Publications, was particularly instrumental in getting this volume published. He has provided an invaluable service as an intermediary between the IEEE Press and us. The support from NNC President Patrick K. Simpson, Executive Vice President Walter Karplus and Past President Russell Eberhart, was crucial for the production of this volume. We gratefully acknowledge the support of the Whitiker Foundation and the National Science Foundation.

References


Jacek M. Zurada
Robert J. Marks II
Charles J. Robinson
Louisville, Kentucky
February 27, 1994