Lecture Notes in Computer Science 3498

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Advances in Neural Networks – ISNN 2005

Second International Symposium on Neural Networks
Chongqing, China, May 30 - June 1, 2005
Proceedings, Part III

Springer

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Library of Congress Control Number: 2005926239

CR Subject Classification (1998): F.1, F.2, D.1, G.2, I.2, C.2, I.4-5, J.1-4

ISSN 0302-9743
ISBN-10 3-540-25914-7 Springer Berlin Heidelberg New York
ISBN-13 978-3-540-25914-5 Springer Berlin Heidelberg New York

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Printed in Germany

Typesetting: Camera-ready by author, data conversion by Olgun Computergrafik
Printed on acid-free paper SPIN: 11427469 06/3142 5 4 3 2 1 0

Preface

This book and its sister volumes constitute the proceedings of the 2nd International Symposium on Neural Networks (ISNN 2005). ISNN 2005 was held in the beautiful mountain city Chongqing by the upper Yangtze River in southwestern China during May 30–June 1, 2005, as a sequel of ISNN 2004 successfully held in Dalian, China. ISNN emerged as a leading conference on neural computation in the region with increasing global recognition and impact. ISNN 2005 received 1425 submissions from authors on five continents (Asia, Europe, North America, South America, and Oceania), 33 countries and regions (Mainland China, Hong Kong, Macao, Taiwan, South Korea, Japan, Singapore, Thailand, India, Nepal, Iran, Qatar, United Arab Emirates, Turkey, Lithuania, Hungary, Poland, Austria, Switzerland, Germany, France, Sweden, Norway, Spain, Portugal, UK, USA, Canada, Venezuela, Brazil, Chile, Australia, and New Zealand). Based on rigorous reviews, 483 high-quality papers were selected by the Program Committee for presentation at ISNN 2005 and publication in the proceedings, with an acceptance rate of less than 34%. In addition to the numerous contributed papers, 10 distinguished scholars were invited to give plenary speeches and tutorials at ISNN 2005.

The papers are organized into many topical sections under 20 coherent categories (theoretical analysis, model design, learning methods, optimization methods, kernel methods, component analysis, pattern analysis, signal processing, image processing, financial analysis, system modeling, control systems, robotic systems, telecommunication networks, incidence detection, fault diagnosis, power systems, biomedical applications, and industrial applications, and other applications) spanning all major facets of neural network research and applications. ISNN 2005 provided an international forum for the participants to disseminate new research findings and discuss the state of the art. It also created a pleasant opportunity for the participants to interact and exchange information on emerging areas and future challenges of neural network research.

Many people made significant efforts to ensure the success of this event. The ISNN 2005 organizers are grateful to Chongqing University, Southwest Normal University, Chongqing University of Posts and Telecommunications, Southwest Agricultural University, and Chongqing Education College for their sponsorship; grateful to the National Natural Science Foundation of China for the financial support; and to the Asia Pacific Neural Network Assembly, the European Neural Network Society, the IEEE Computational Intelligence Society, and the IEEE Circuits and Systems Society for their technical co-sponsorship. The organizers would like to thank the members of the Advisory Committee for their spiritual support, the members of the Program Committee for reviewing the papers, and the members of the Publication Committee for checking the papers. The organizers would particularly like to thank the publisher, Springer, for their cooperation in publishing the proceedings as three volumes of the Lecture Notes

in Computer Science series. Last but not least, the organizers would like to thank all the authors for contributing their papers to ISNN 2005. Their enthusiastic contributions and participation were essential parts of the symposium with which the organizers were proud to be involved.

May 2005

Jun Wang
Xiaofeng Liao
Zhang Yi

ISNN 2005 Organization

ISNN 2005 was organized and sponsored by Chongqing University, Southwest Normal University, Chongqing University of Posts and Telecommunications, Southwest Agricultural University, and Chongqing Education College in cooperation with the Chinese University of Hong Kong. It was technically cosponsored by the Asia Pacific Neural Network Assembly, the European Neural Network Society, the IEEE Circuits and Systems Society, and the IEEE Computational Intelligence Society. It was financially supported by the National Natural Science Foundation of China and K.C. Wong Education Foundation of Hong Kong.

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