2000 International Joint Conference on Neural Networks (V. 4)

Proceedings of the IEEE-INNS-ENNS International Joint Conference on Neural Networks

IJCNN 2000

江苏工业学院图书馆
藏书章

Proceedings of the IEEE-INNS-ENNS International Joint Conference on Neural Networks

IJCNN 2000

Como, Italy • 24–27 July 2000

Neural Computing: New Challenges and Perspectives for the New Millennium

Sponsored by
IEEE Neural Network Council
International Neural Network Society
European Neural Network Society

With the technical cooperation of
Japanese Neural Network Society
AEI—the Italian Association of Electrical and Electronic Engineers
SIREN—the Italian Association of Neural Networks
AI*IA—the Italian Association for Artificial Intelligence

Edited by **Shun-Ichi Amari, C. Lee Giles, Marco Gori, and Vincenzo Piuri**

IEEE COMPUTER SOCIETY

Los Alamitos, California

Washington • Brussels • Tokyo

Copyright © 2000 by The Institute of Electrical and Electronics Engineers, Inc.
All rights reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries may photocopy beyond the limits of US copyright law, for private use of patrons, those articles in this volume that carry a code at the bottom of the first page, provided that the per-copy fee indicated in the code is paid through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

Other copying, reprint, or republication requests should be addressed to: IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, P.O. Box 133, Piscataway, NJ 08855-1331.

The papers in this book comprise the proceedings of the meeting mentioned on the cover and title page. They reflect the authors' opinions and, in the interests of timely dissemination, are published as presented and without change. Their inclusion in this publication does not necessarily constitute endorsement by the editors, the IEEE Computer Society, or the Institute of Electrical and Electronics Engineers, Inc.

IEEE CSP Number PR00619
ISBN: 0-7695-0619-4 (Softbound)
ISBN: 0-7803-6541-0 (Casebound)
ISBN: 0-7803-0621-6 (Microfiche)
Library of Congress: 00-102388
ISSN: 1098-7576

IEEE Computer Society
Customer Service Center
10662 Los Vaqueros Circle
P.O. Box 3014
Los Alamitos, CA 90720-1314
Tel: + 1 714 821 8380
Fax: + 1 714 821 4641
http://computer.org/
csbooks@computer.org

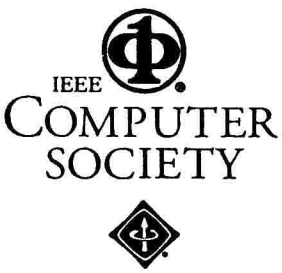
IEEE Service Center
445 Hoes Lane
P.O. Box 1331
Piscataway, NJ 08855-1331
Tel: + 1 732 981 0060
Fax: + 1 732 981 9667
http://shop.ieee.org/store/
customer-service@ieee.org

IEEE Computer Society
Asia/Pacific Office
Watanabe Bldg., 1-4-2
Minami-Aoyama
Minato-ku, Tokyo 107-0062
JAPAN
Tel: + 81 3 3408 3118
Fax: + 81 3 3408 3553
tokyo.ofc@computer.org

Editorial production by Anne Rawlinson
with assistance from Frances Titsworth and Bob Werner

Cover art production by Alex Torres

Printed in the United States of America by The Printing House



Message from the Conference Chairpersons

The IEEE-INNS-ENNS International Joint Conference on Neural Networks (IJCNN 2000) in Como, Italy, is the year 2000 edition of a long and successful series that gathered the most outstanding scientists and practitioners in all areas of neural network theory and applications from all over the world. This is the first time that the conference is held in Europe, as a worldwide recognition of the European contribution to the field. We are honored by this and grateful to the sponsoring bodies.

The topic of this edition is "*Neural Computing: New Challenges and Perspectives for the New Millennium.*" We recognize in fact a compelling need to compare, update, and share our knowledge and best practice to deal effectively with the evolving challenges coming from research, industry, and daily life in the upcoming millennium. This conference aims therefore to become a milestone, an opportunity for all of us to review our past and to define new challenges and perspectives for the foregoing years.

The research on artificial neural networks comprises a wide spectrum of directions, both theoretical and practical. This conference reflects all these aspects in detail and offers the possibility of discussing and comparing the latest results obtained by researchers all over the world. In particular the conference sessions will cover topics related to aspects of computational intelligence, cognitive neuroscience, neural network architectures, hardware implementations, hybrid systems, and applications. This makes IJCNN 2000 a major international forum for researchers, practitioners, policy makers, industries, and all people who are interested in the latest developments both of research and application of neural networks.

The conference will offer a number of high quality tutorials on basic aspects as well as on recent advancements, a wide technical program with plenty of sessions to present results of worldwide research and application efforts, some interesting plenary talks by outstanding scientists, and interactive panels for open discussion on some hot topics. Organizing a large conference like IJCNN 2000 is a complex task involving many people for a number of different aspects. We want therefore to thank everyone who contributed to the organization: without their valuable efforts the meeting could not have been held.

Although the new telecommunication technologies will allow easy, fast and wide long distance communications and information access, direct human interaction—happily—still remains fundamental to exchange ideas, establish new links, make new friends, and create new opportunities for international cooperation.

We wish all the attendees an enjoyable participation in the conference and a nice stay in Italy!

General Chairperson
Prof. Mariagiovanna Sami
Politecnico di Milano, Italy

Vice General Chairperson
Prof. Eros Pasero
Politecnico di Torino, Italy

Technical Program Chairperson
Prof. Marco Gori
Università di Siena, Italy

Technical Program Vice Chairpersons

Prof. Shun-Ichi Amari
RIKEN, Japan

Prof. C. Lee Giles
NEC Research Institute, USA

Prof. Vincenzo Piuri
Politecnico di Milano, Italy

此为试读,需要完整PDF请访问: www.ertongbook.com

Conference Organizers

General Chairperson

Prof. Mariagiovanna Sami, Politecnico di Milano, Italy

Vice General Chairperson

Prof. Eros Pasero, Politecnico di Torino, Italy

Technical Program Committee Chairperson

Prof. Marco Gori, Università di Siena, Italy

Technical Program Committee Vice-Chairperson for Europe and Africa

Prof. Vincenzo Piuri, Politecnico di Milano, Italy

Technical Program Committee Vice-Chairperson for the Americas

Prof. C. Lee Giles, NEC Research Institute, USA

Technical Program Committee Vice-Chairperson for Asia and Oceania

Prof. Shun-Ichi Amari, RIKEN, Japan

Special Sessions Chairperson

Prof. Robert J. Marks II, University of Washington, USA

Special Sessions Committee Members

Dr. Payman Arabshahi, JPL, USA
Prof. Alexandre P. Alves da Silva, Federal Engineering School at Itajuba, Brazil
Prof. Mohamed El-Sharkawi, University of Washington, USA
Dr. Michael Healy, The Boeing Company, USA
Mr. Jae-Byung Jung, University of Washington, USA

Tutorial Chairpersons

Prof. Erkki Oja, Helsinki University of Technology, Finland
Prof. Carlo Morabito, Università di Reggio Calabria, Italy
Dr. Harold Szu, Office of Naval Research, USA

Panel & Plenary Chairperson

Prof. Jacek Zurada, University of Louisville, USA

Steering Committee Chairperson

Prof. Gianni Orlandi, Università di Roma "La Sapienza", Italy

Steering Committee Members

Dr. David Brown, FDA, USA
Dr. Clifford Lau, Office of Naval Research 363, USA
Prof. Hanspeter A. Mallot, Max Planck Institut, Germany
Dr. Enrique H. Ruspini, SRI International, USA
Dr. Harold Szu, Office of Naval Research, USA
Prof. Minoru Tsukada, Tamagawa University, Japan
Dr. Paul Werbos, NSF, USA

IEEE Liason

Prof. Evangelia Micheli-Tzanakou, Rutgers University, USA

INNS Liason

Prof. Carlo Morabito, Università di Reggio Calabria, Italy

ENNS Liason

Prof. Hanspeter A. Mallot, Max Planck Institut, Germany

International Liason

Prof. Toshio Fukuda, Nagoya University, Japan

Financial Chairperson

Dr. William Fornaciari, Politecnico di Milano, Italy

Publication Chairperson

Dr. Marco Maggini, Università di Siena, Italy

Publicity Chairperson

Prof. Ron Sun, University of Missouri, USA

Local Arrangement Chairperson

Prof. Cesare Alippi, Politecnico di Milano, Italy

Program Committee Members

Prof. I. Aleksander, Imperial College, UK
Prof. Asakura, Fukui University, Japan
Prof. Y. Bengio, University of Montreal, Canada
Prof. J. Buhmann, Universität Bonn, Germany
Dr. D. Brown, FDA, USA
Prof. P. Campadelli, Università di Milano, Italy
Prof. A. Chella, Università di Palermo, Italy
Prof. H. Chi, Peking University, P.R. China
Dr. A. Colla, Elsag, Italy
Prof. G. Cybenko, University of Dartmouth, USA
Prof. W. Dunin-Barkowski, Texas Tech University, USA

Dr. F. Feldkamp, Ford, USA
Dr. F. Fogelman-Soulie, BusinessDecision, France
Prof. M. Forcada, Universidad de Alicante, Spain
Prof. L.-M. Fu, University of Florida, USA
Prof. T. Fukuda, Nagoya University, Japan
Prof. K. Fukushima, University of Electro-Communications, Japan
Dr. P. Gallinari, Université Paris 6, France
Prof. W. Gerstner, EPFL, Switzerland
Prof. J. Ghosh, University of Texas, USA
Prof. S. Gielen, Katolieke Universiteit Nijmegen, The Netherlands
Prof. K. Goser, Universität Dortmund, Germany
Prof. Hirasawa, University of Kyushu, Japan
Prof. M. Ishikawa, Kyushu Institute of Technology, Japan
Dr. B. Kamgar-Parsi, NRL, USA
Prof. N. Kasobov, University of Otago, New Zealand
Prof. N. Kubota, Osaka Institute of Technology, Japan
Prof. H.A.Mallot, Max Planck Institut, Germany
Prof. D. Mange, EPFL, Switzerland
Prof. P. Morasso, Università di Genova, Italy
Prof. C. Morabito, Università di Reggio Calabria, Italy
Prof. N. Murshed, Universidade Tuiuti do Paraná, Brazil
Dr. L. Niklasson, International Relations, Sweden
Prof. E. Oja, Helsinki University of Technology, Finland
Prof. S. Omatu, Osaka Prefecture University, Japan
Prof. P. Orponen, University of Jyväskylä, Finland
Prof. G. Palm, University of Ulm, Germany
Prof. F. Palmieri, Università di Napoli, Italy
Prof. A. Parlos, Texas A&M University, USA
Prof. W. Pedrycz, University of Alberta, Canada
Prof. S. Phatak Dhananjay, University of Binghamton, USA
Prof. I. Pitas, Aristotle University of Thessaliniki, Greece
Prof. A. Prieto, University of Granada, Spain
Prof. T. Roska, University of Berkeley, USA
Prof. A. Roy, Arizona State University, USA
Dr. R. Serra, TWX, Italy
Prof. J. Shawe-Taylor, University of London, UK
Prof. S. Singh, University of Exeter, UK
Prof. A. Sperduti, Università di Pisa, Italy
Prof. R. Sun, University of Missouri, USA
Dr. R. Tagliaferri, Università di Salerno, Italy
Prof. J. G. Taylor, King's College London, UK
Prof. D. Wang, Ohio State University, USA
Prof. S. Wermeter, University of Sunderland, UK
Prof. L. Xu, Chinese University of Hong Kong, P.R. China

Registration Chairperson

Mrs. Lee Myers, Myers-Smith Inc., USA

Table of Contents

Session MB6: Classification I

Session MB7: Multilayer Perceptrons I

Session MB8: Image Processing I

Session MD4: Plenary Talk

Session ME1: Supervised Learning I

此为试读,需要完整PDF请访问: www.ertongbook.com

VOLUME II

VOLUME III

Session VB6 - Function Approximation II

Session VB7 - Spiking Neural Networks

Session VB8 - Face Recognition

Session VC6 - Blind Signal Separation

此为试读,需要完整PDF请访问: www.ertongbook.com