Fuliang Yin
Jun Wang
Chengan Guo (Eds.)

Advances in Neural Networks – ISNN 2004

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International Symposium on Neural Networks
Dalian, China, August 2004
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Volume Editors

Fuliang Yin
Chengan Guo
Dalian University of Technology
School of Electronic and Information Engineering
Dalian, Liaoning, China
E-mail: {flyin, cguo}@dlut.edu.cn

Jun Wang
The Chinese University of Hong Kong
Department of Automation and Computer-Aided Engineering
Shatin, New Territories, Hong Kong
E-mail: jwang@acae.cuhk.edu.hk

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Preface

This book constitutes the proceedings of the International Symposium on Neural Networks (ISNN 2004) held in Dalian, Liaoning, China during August 19–21, 2004. ISNN 2004 received over 800 submissions from authors in five continents (Asia, Europe, North America, South America, and Oceania), and 23 countries and regions (mainland China, Hong Kong, Taiwan, South Korea, Japan, Singapore, India, Iran, Israel, Turkey, Hungary, Poland, Germany, France, Belgium, Spain, UK, USA, Canada, Mexico, Venezuela, Chile, and Australia). Based on reviews, the Program Committee selected 329 high-quality papers for presentation at ISNN 2004 and publication in the proceedings. The papers are organized into many topical sections under 11 major categories (theoretical analysis; learning and optimization; support vector machines; blind source separation, independent component analysis, and principal component analysis; clustering and classification; robotics and control; telecommunications; signal, image and time series processing; detection, diagnostics, and computer security; biomedical applications; and other applications) covering the whole spectrum of the recent neural network research and development. In addition to the numerous contributed papers, five distinguished scholars were invited to give plenary speeches at ISNN 2004.

ISNN 2004 was an inaugural event. It brought together a few hundred researchers, educators, scientists, and practitioners to the beautiful coastal city Dalian in northeastern China. It provided an international forum for the participants to present new results, to discuss the state of the art, and to exchange information on emerging areas and future trends of neural network research. It also created a nice opportunity for the participants to meet colleagues and make friends who share similar research interests.

The organizers of ISNN 2004 made great efforts to ensure the success of this event. We would like to thank Dalian University of Technology for the sponsorship, various IEEE organizations (especially the IEEE Circuits and Systems Society) for the technical co-sponsorship, and the members of the ISNN 2004 Advisory Committee for their spiritual support. We would also like to thank the members of the Program Committee and additional referees for reviewing the papers and the Publication Committee for checking and compiling the papers in a very short period of time. We would also like to thank the publisher, Springer-Verlag, for their agreement and cooperation to publish the proceedings as a volume of the Lecture Notes in Computer Science. Finally, we would like to thank all the authors for contributing their papers. Without their high-quality papers, this symposium would not have been possible.

August 2004

Fuliang Yin
Jun Wang
Chengan Guo

ISNN 2004 Organization

ISNN 2004 was organized and sponsored by Dalian University of Technology in cooperation with the Chinese University of Hong Kong. It was technically cosponsored by the IEEE Circuits and Systems Society, IEEE Computational Intelligence Society (Beijing, Hong Kong, and Singapore Chapters), and IEEE Control Systems Society and Robotics and Automation Society (Hong Kong Joint Chapter).

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