The 1996 IEEE International Conference on Neural Networks

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The 1996 International Conference on Neural Networks (ICNN 96) has continued our tradition in presenting state-of-the-art research and development results in the exciting area of neural networks. Over the last decade, we have seen this conference evolve to become one of the foremost conferences in this area.

As General Chair of the conference, I am indebted to many enthusiastic individuals who have worked tirelessly in the last twelve months in making this conference a reality.

First, I like to specially thank Prof. Bing Sheu who has done an excellent job in organizing the Program Committee and in selecting a collection of high-quality papers for this conference. He has worked closely with his area committees and his staff in evaluating all submitted papers under very tight schedules. Thanks are due to Prof. Jenq-Neng Hwang who has organized a good tutorial program that strikes a balance between theory and practice in neural networks.

Special thanks are due to Prof. Jacek Zurada, who has taken the challenge to organize eight plenary speeches, a banquet speech, and nine special sessions. He has attracted many highly reputable speakers in the area to present their works in this rapidly evolving field. These speeches will be the highlights of this conference.

In addition, he has taken the responsibility within this tight schedule to organize the Award Committee and to evaluate best-paper candidates. I would like to thank Prof. Mohammed Ismail for soliciting and evaluating panel proposals.

I also highly appreciate the efforts of Prof. Joseph Cavalaro in serving as the Publicity Chair of the conference. He often worked under tight schedules with his assistant, Mandy Nevin, in getting Calls and Programs to magazines and print shops and in designing a colorful home page for the conference. The home page they have designed has been accessed by many people in the last twelve months and has saved us a substantial amount of advertising cost. I am also indebted to Prof. Toshio Fukuda and his International Liaison Committee in publicizing the conference in Asia and in Europe.

I am indebted to Prof. Nicolaos Karayiannis and his Exhibit Committee in soliciting exhibitors, Dr. Clifford Lau and his Local Arrangement Committee for arranging student help, Prof. Pradip Srimani for putting together Web page containing all the abstracts, and Mr. Peter Wai for managing the finances of the conference and for telli me when we ran out of money.

Last but not least, I would like to thank the IE Neural Network Council for arranging student help, Pr Pradip Srimani for putting together a Web page containi all the abstracts, and Mr. Peter Wahle for managing t finances of the conference and for telling me when we r out of money.

Last but not least, I would like to thank the IE Neural Network Council for its support in the last two yea Walter Karplus, Pat Simpson, Clifford Lau, Antti Koivo, J Bezdek, Pierro Bonissone, and other Council members ha given us all the flexibility and freedom in running this cc ference.

Of course, I am very much indebted to Jim Bezd who convinced me two years ago to organize this conf ence when we met in Puerto Rico. Finally, I would like thank Ms. Chew-Chin Phua for her support in responding numerous requests, and Steve Marlin and his staff Meeting Management for taking care of many details organizing the conference.

Thank you all for attending this conference, an sincerely hope that you will find this conference rewardi for you.

Benjamin W. Wah
General Chair
University of Illinois at Urbana-Champaign
Urbana, Illinois, USA

A Message from the Technical Program Chair

It gives me great pleasure to welcome you to ICNN 96. The technical program reflects the tremendous growth in the field with contributions from a significantly large number of researchers and developers around the world. It provides a good balance between theory and practical applications in many diverse areas. The program contains both contributed and invited sessions in oral and poster presentations. Each day of the conference features two plenary talks. The tutorial program consists of six neural-network tutorials provided by experts in the field. I hope that you are able to enjoy this special opportunity the conference provides with a range of complementary topics.

The plenary talks by Marks, Sigelemann, Grossberg, Feldkamp, Wah, Berger, Carpenter, and Heckerman provide highly interesting and valubable information to the delegates. The selected contributed and invited papers are organized by the program committee into several parallel trakcs. These tracks cover many of hte emerging and traditional topics of neural networks. Five panels provide forum for the delegates to understand various aspects of research issues in great depth.

I like to specially thank Prof. Benjamin Wah, the Conference General Chair, who recruited me to serve in this important position. His Organizing Committee and his secretary, Ms. Chew-Chin Phua, provide first-class support with no intervention in our selection of accepted papers. He is the primary person to be recognized for the success of this conference.

Special thanks go to the Chairs/Co-Chairs of the twelve subcommittees and members of the Technical Program Committee, and numerous additional reviewers who helped review papers and made valuable suggestions to improve the quality of the papers. With their efforts, the overall acceptance rate for the contributed papers is around 65%, which helps to achieve very high-quality technical program. The same standard was used to select papers submitted against the original deadline of October 16, 1995, as well as the extended deadline of December 29, 1995.

All contributed papers were reviewed thoroughly and were classified into twelve areas: Applications; Supervised/Unsupervised Learning, Learning and Memory; Biological and Cellular Neural Networks; Electronic Implementation; Pattern Recognition and Image Processing; Intelligent Control and System Identification; Robotics and Machine Vision; Optimization and Associative Memory; Speech Processing, Time Series & Filtering; Architectures and Hybrid Systems; and Computational Intelligence. The subcommittee chairs include Profs. Mary Lou Padgett, V. David Sanchez A., Igor Aleksander, Tamas Roska, Lex Akers, Yu Hen Hu, Lyle H. Ungar, Antti J. Koivo, Andreas Andreou, Dr. Allen Gorin, Profs. Thomas P. Caudell, and Russell C. Eberhart. They also suggested best-paper candidates to the Award committee. All invited papers were coordinated by the Special Session Committee Chairs and were reviewed rigorously. The technical program committee benefited a great deal from the enthusiastic support ofvolunteers, including Michelle Yibing Wang, Richard Hung-Kai Tsai, Yoichi Oshima, Ramona Delphine Gordon. I would like to thank my wife Shelley for her understanding that I had to spend so many weekends in front of the computer to organize files.

We greatly appreciate all the authors, speakers, session chairs, and the audio-visual team, who make the conference what it is. Of course, I would like to thank all the attendees for participating in the conference.

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Track I

Session L1: Supervised/Unsupervised Learning I

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Session L2: Supervised/Unsupervised Learning II

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Session L3: Supervised/Unsupervised Learning III

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Session L5: Supervised/Unsupervised Learning V

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Session L6: Supervised/Unsupervised Learning VI

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Session L7: Dynamic Modeling and Reinforcement Learning

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Session L8: Supervised/Unsupervised Learning VII

Session M1: Learning and Memory I

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Session M5: Learning and Memory V