General Chair: Clifford Lau
Honorary Chair: Bernard Widrow
Program Chair: John J. Shynk

**CONFERENCE ANNOUNCEMENT
AND CALL FOR PAPERS**
**Papers for oral and poster presenta-
tions are solicited. Topics include:**

- Applications
- Artificially Intelligent Neural
  Networks
- Associative Memory
- Electronic Neurocomputers
- Fuzzy Neural Networks
- Image Processing
- Invertebrate Neural Neworks
- Machine Vision
- Neurocognition
- Neurodynamics
- Optical Neurocomputers
- Optimization
- Pattern Recognition
- Robotics and Control
- Sensation and Perception
- Sensorimotor Control Systems
- Speech Processing
- Supervised Learning
- Unsupervised Learning

Conference includes Tutorials,
Exhibits, Plenary Sessions, and
Social Activities
Deadline is January 15, 1992. Six copies
of the paper must be submitted, six page
maximum, including figures. Papers must
be camera-ready on 8 1/2 x 11 white
papers, one-column format in Times or
similar font style. 10 points or larger with
one inch margins on all four sides. Title,
author name(s) and affiliation(s) must be
on top of the first page followed by
abstract. Papers will be printed as submit-
ted. A covering letter must show:
1. Title of paper 2. Name, address and
telephone number of corresponding author
3. Your choice of technical session.

Meeting Management
IJCNN '92 Conference Coordinator
5665 Oberlin Drive, Suite #110
San Diego, CA 92121
Telephone (619) 453-6222
FAX (619) 535-3880
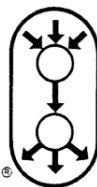
IJCNN

INTERNATIONAL JOINT CONFERENCE ON NEURAL NETWORKS

Baltimore, Maryland
June 7-11, 1992

THE INSTITUTE OF
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SOCIETY

IJCNN92/Baltimore:
The best conference on neural networks ever

Clifford Lau
Office of Naval Research
General Chair

The 1992 International Joint Conference on Neural Networks (IJCNN) was held at the Baltimore Convention Center on June 7 - 11, 1992. This conference was one of the series of very successful IJCNNs that were co-sponsored by the IEEE Neural Network Council (NNC) and the International Neural Network Society (INNS).

The planning for the conference started two years ago when the IEEE NNC asked me to be the general chair. I was only delighted for such an opportunity, since IJCNN represented the best of all the conferences on neural networks. I was also presented a challenge to do better than past IJCNNs because of the uncertainty in the economy at the time. Throughout the planning process, I have had the most enthusiastic support from the NNC (Dr. Russell Eberhart, President; Dr. Robert Marks, Past President) and from the INNS (Dr. Paul Werbos, President; Dr. Bernard Widrow, Past President). I would like to thank the IEEE NNC and the INNS for giving me the autonomy to organize the conference the way I saw fit. As it turned out, in spite of the recession, the 1992 IJCNN was the best conference on neural networks ever. Preliminary data indicated that more than 1,400 people participated in the conference, from 31 countries.

The conference consisted of a day of tutorials on June 7, when 158 peoples registered for ten different tutorials. The best attended tutorial was the one given by Michael Jordan on New Learning Algorithms. During the four day conference, each day was started by a plenary talk and was followed by four parallel technical sessions. A total of 598 papers, including both oral and poster papers, were presented. This was the first time that many excellent papers were presented at IJCNN!

Another first for IJCNN was the fact that for the first time in history the conference proceedings were put in the form of a CD ROM. The entire four volumes of the IJCNN'92 Proceedings were put in one CD ROM. This made it much easier to carry around. The CD ROM project was sponsored by the IEEE NNC in collaboration with the IEEE Circuits and Systems Society and the IEEE Engineering in Medicine and Biology Society. Much thanks belonged to Mani Soma of the University of Washington and Stamatios Kartalopoulos of AT&T Bell Laboratories for spearheading the CD ROM effort.

The conference was kicked off on Monday, June 8, by a plenary talk by Professor Stephen Grossberg of Boston University on *Supervised and Unsupervised Learning*. Grossberg, of course, was no stranger to the neural network community and was well known for his work on Adaptive Resonance Theory. The plenary talk on Tuesday was given by Professor Leon Cooper of Brown University on *Synaptic Plasticity in the Visual Cortex: Toward a Molecular Basis for Learning and Memory Storage*. Cooper, in addition to his Nobel Prize on the theoretical understanding of low temperature superconductors, was also well known for his work on the mean field theory for vision processing. On Wednesday morning, the plenary talk was given by Professor Gary Lynch of the University of California at Irvine on the Synaptic Learning Rules: the Causes and Computational Consequences of LTP. Lynch was well known for his work on Long Term Potentiation as a mechanism for synaptic modification. The plenary talk on Thursday was given by Dr. Jerome Feldman of the International Computer Science Institute on *Natural Computation and Artificial Intelligence*. Feldman was one of the first computer scientists to embrace the connectionist approach to artificial intelligence.

The highlight of the conference was the keynote address on Tuesday night given by Dr. Eugene Wong (Associate Director for Industrial Technology, Executive Office of the President, Office of Science Technology Policy) on High Performance Computing. Dr. Wong was the former Chairman of the Department of Electrical Engineering and Computer Science at the University of California at Berkeley and knew a great deal about neural networks. His talk represented the strong support for high performance computing including neural computing in the Bush Administration.

In addition to and in parallel with the technical sessions, special sessions with invited speakers were also outstanding features of the conference. The talk by Robert Lucky of AT&T Bell Laboratories drew such a crowd that it was standing room only. All the special sessions were well attended. Special thanks should go to the Special Sessions Chair, Dr. Andy Penz of Texas Instruments for organizing such outstanding sessions. In conjunction with the conference, a total of 30 exhibitors displayed their neural network hardware, software, and books at the conference. Credit for the excellent exhibit show belonged to the Exhibits Chair, Dr. Herbert Wang of Rockwell Science Center. The student volunteers were a big part of the conference, and were a major reason the conference ran so smoothly. Many thanks are due to the Volunteers Chair, Nina Kowalski of the