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CoNNnections Newsletter

CoNNnections is published quarterly by the
Institute of Electrical and Electronics Engi-
neers for individual subscribers to the IEEE
Transactions on Neural Networks.

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CALL FOR PAPERS

1992 International Joint Conference on Neural Networks
Beijing, China
November 3-6, 1992

TOPICS OF INTEREST

Papers may be submitted for consideration as oral or poster presentations in the following areas:

- Applications
- Biomedical Applications
- Financial Applications
- Mathematical Models
- Optimization
- Neural Networks
- Robotics & Control
- Vision & H audition

PAPERS MUST BE RECEIVED BY FEBRUARY 29, 1992.

All submissions will be acknowledged by mail, and accepted papers will be published as submitted.

Send Papers to:

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Research Triangle Park NC 27709 USA
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Beijing 100088, China
Tel: 201-3388 ext. 2203
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Fax: 500-3213

PAPERS MUST BE RECEIVED BY FEBRUARY 29, 1992.

All submissions will be acknowledged by mail, and accepted papers will be published as submitted.

As I take over the Presidency of the IEEE Neural Networks Council, I reflect over the past two years under the leadership of Bob Marks. His guidance was creative, yet even-handed. He always considered all the sides of a question, but wasn't afraid to make hard decisions when they were needed. He paid attention to everything—detail, but never lost sight of the big picture. And he insisted on the highest standards of integrity and service to the members. I hope I can do as well.

The IJCNN in Singapore was a resounding success by any measure. Over 600 participants heard excellent papers, and experienced the outstanding local hospitality of the IEEE Singapore Section. General Chairman Teck Seng Low and his colleagues have possibly hosted the first three-kilo conference in IEEE history...that is, the average weight gain during the conference exceeded three kilograms per attendee.

Our next IJCNN is in Baltimore this June under the capable leadership of Clifford Lau and his organizing committee. Having just moved to North Carolina after living near Baltimore for almost 20 years, I can vouch for the excellent culinary and sight-seeing opportunities in the Baltimore area. One warning: in Baltimore, eating steamed crabs isn't considered a meal: it's a social event!

Following the Singapore IJCNN, my wife Francie and I spent about two weeks in China, and several days in Japan. Prof. Sha Zong, General Chairman of the 1992 Beijing IJCNN, was our host in China. We traveled to Beijing, Guilin, Xi’an, Nanjing and Shanghai. I lectured on neural networks in several locations, and spoke at the Second Annual Chinese National Conference on Neural Networks at Southeast University in Nanjing.

Everywhere we went, the hospitality was warm and the food was delicious. IEEE membership is growing rapidly in China, with over 700 members now in the Beijing Section alone. Prof. Sha, with his organizing committee that includes Profs. Wu You Shou and Zhong Yi Xin, are doing a conscientious and efficient job in preparing for the first international neural networks conference to be held in China.

When I was a small boy growing up in Kansas, I dreamed of one day going to China and seeing the magnificent sights such as the Great Wall, the Forbidden City and the Ming Tombs. Now I’ve seen them. And now, thanks to the 1992 Beijing meeting, you can see them, too. Words cannot describe China. From the grandeur of the Great Wall to the beauty of the Li River near Guilin, it is simply not to be missed. So, even if you have to borrow money for the air fare, this is an opportunity worth taking advantage of. I hope to see many of you in Beijing.

Our host in Japan was Prof. Toshio Fukuda, who is the Chairman of the Steering Committee for the 1993 conference in Nagoya. Francie and I will never forget the dinner given by Toshie and his wife at their home, or introducing Russ Eberhart.

Russell C. Eberhart
Research Triangle Institute
IEEE NNC Standards Committee Report

Walter J. Karplus, UCLA and Mary Lou Padgett, Auburn University

The Standards Committee was formed at the initiation of the IEEE Neural Networks Council to begin work on guidelines and standards. With Prof. Walter J. Karplus as chair and Mary Lou Padgett as vice-chair, a Standards Coordinating Committee was appointed and held its first meeting on February 3, 1991. This was followed by an open meeting for attendees of IJCNN-91, the Third Workshop on Neural Networks: Academic / Industrial / NASA / Technical Interchange and Tutorials, which will be held at the Auburn University Hotel and Conference Center, Auburn, Alabama, February 10-12, 1992.

The three provisional Working Groups are as follows:

- **Glossary and Symbols**
  Mary Lou Padgett (chair)
  Auburn University
  1165 Owens Rd., Auburn, AL 36830
  (205) 824-2477
  mpadgett@eng.auburn.edu
  Purpose: establish equivalences and assist communication among the widely divergent neural networks community members.

- **Intelligence Committee**
  The intelligence committee met in conjunction with the SCS Neural Networks and Software Committee in Orlando in October (at SimTech 91). About five hard-working volunteers scoured a collection of neural networks texts and tutorial material for ideas.
  The presentations in the available texts were compared with the preliminary guidelines. Some suggestions and comments were made. Walter Karplus’ suggestions from the Seattle meeting were incorporated in the CCF report. The list of vocabulary terms and equivalences provided by Eberhart was examined and found helpful. The team suggested that a diagram or diagrams showing the terms pointing to the network structures might be very helpful. Several of these diagrams were prepared.
  The meeting of several days in duration will be needed at some point to actually hammer out a written report. This meeting may consist of interested persons working independently, then comparing suggestions at or before the next formal gathering. Enough publicity has been circulated to allow anyone wanting to contribute to provide written suggestions to the Standards Committee. Their enthusiasm and encouragement are very welcome.
  The committee is working to help everyone understand a new and very broad-based technology and to firm up the foundation so the next steps in development can be made in an orderly manner. Guidelines that will foster new ideas and changes are sought.

- **Paradigms**
  Prof. E. (Litsa) Tzankou (chair)
  Dept. of Biomedical Engineering
  P.O. Box 909
  Rutgers University
  Piscataway NJ 08855-0909
  (908) 932-2037
  email: etzanako@elbereth.rutgers.edu
  Purpose: establish elementary building blocks for the construction and identification of neural network paradigms.

  The paradigms committee is seeking funding to support a graduate student to code sample paradigms to provide some useful tools to the community. Any suggestions along this line would be welcome.

- **Performance Evaluation Methodology**
  Robert Shelton (chair)
  PT4, NASA/JSC
  Houston TX 77055
  (713) 453-8110
  shelton@gothamcity.jsc.nasa.gov

  The performance evaluation methodology committee has been active via email. About a dozen people have communicated their interest to Professor Shelton. The most enthusiastic supporters of this committee are people attempting to evaluate alternate products before purchasing them. The defense community would like disinterested parties to help establish benchmarking guidelines to help with communication and fair evaluation.

  Several of these people will make technical presentations at WNN92 and will be available for conversation there.

  We expect to formalize these working groups in February, 1992, and also to form an additional Working Group to deal with Hardware and Software Interfaces. Almost 250 people have indicated an interest in receiving written publications from the Standards Committee. Their enthusiasm and encouragement are very welcome.

  The committee is working to help everyone understand a new and very broad-based technology and to firm up the foundation so the next steps in development can be made in an orderly manner. Guidelines that will foster new ideas and changes are sought.

  Anyone interested in participating on the Standards Committee is encouraged to contact the above individuals or Professor Walter J. Karplus.

  Prof. Walter J. Karplus
  Chair IEEE NNC Standards Committee
  Computer Science Department
  University of California
  Los Angeles CA 90024
  (213) 825-2929
  email: karplus@cs.ucla.edu

IJCNN 91 Singapore: The International Joint Conference on Neural Networks

Teck Seng Low, General Chairman

Singapore hosted the first IJCNN to be held outside the US from November 19-21, 1991. The conference was sponsored by the IEEE Singapore Section, the IEEE Neural Networks Council, and the INNS. It attracted 200 tutorial attendees and 600 conference attendees. A total of 457 papers were accepted for presentation at the conference. The breakdown of paper submission and attendees showed IJCNN 91 Singapore to be a truly international. It reflects the pace of Neural Network research around the world. IJCNN 91 Singapore provided an opportunity for the 200 student attendees from all over the world to meet.

On the opening day seven tutorials were conducted. This was followed in the evening by a welcome reception and a public lecture by Prof. Terrence Sejnowski. This lecture, "Neural Computation," was organized for the Singapore public, including high school students, and conference attendees and the popularity of the lecture filled the 600 capacity hall to the brim. This lecture was co-sponsored by the National Science and Technology Board of Singapore who also co-sponsored the seminar by Dr. Tom Caudell of Boeing Corp. at the National University of Singapore on the 22 November.

The conference from 19-21 November saw high attendance at the plenary addresses given by Prof. Kohonen, Prof. Nishikawa and Prof. Narendra. The invited talks by Professors Eckmiller, Fukuda Lacher, Sejnowski and Drs. Eberhart, Bulsara, Kawato and Allinson were also well received.

The poster sessions proved popular and many were very well presented. This may be due to the US$50 award for the best poster presentation at each of the six sessions. In line with the increased applications of neural networks in industry and their possible impact in the finance and banking industry, and

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**Winners of IJCNN Singapore Poster Awards**

**Poster Session 1**
Tactile robot shape recognition using geometric and topological features
Ng E.W.K.; Coghill G.G., and Tuck D.L., University of Auckland, New Zealand

**Poster Session 2**
Neural Somatotopical Mapping for VLSI Placement Optimization
Carlson, Patricia A and The, Anthony, Human Resources Directorate, USA

**Poster Session 3**
A Cognitively Based Neural Network for Determining Paragraph Coherence
Hashimaya, T., Furushashi, K. and Uchikawa, K., Nagoa University Japan; Kato H., Nippondenso Co. Ltd. Japan

**Poster Session 4**
Applying Artificial Neural Networks to Object and Orientation Recognition for Robotic Handling andManipulation
Bowers, Angela, BHP Research, Melbourne Laboratories, Australia

**Poster Session 5**
A Free Graph Method Using a Fuzzy Neural Network for Expressing Conditions of Complex Systems
Teck Seng Low, General Chairman

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**IJCNN attendees learn local dances at the conference banquet. (Photo courtesy Bob Marks)**
Council Dominates Attention at IEEE News Briefing

Yearly, the IEEE holds a media briefing attended by the world's leaders in technical journalism. The IEEE Neural Net works Council (NNC) participated for the first time in this event in New York last year, and according to accounts in the IEEE Institute and Spectrum, was the dominant participant in the event. The NNC's participation in the briefing was coordinated by current NNC President Russ Eberhart. Presentations were made by the Council in the areas of neural networks, fuzzy logic and virtual reality. Dr. Eberhart (Research Triangle Institute) played a musical composition crafted by a neural network he trained on songs such as 'O Susanna' and 'She'll be Coming Around the Mountain'. The new song melody, dubbed 'A New American Folklore' by the IEEE Institute, was set to an accompaniment and was played at the briefing to an appreciating audience. Dr. Jim Bezdek (University of West Florida) manually balanced a broomstick to demonstrate the difficulty in doing so. He then showed a video of a fuzzy broom stick balancer. The difference was that a mouse was running about in a cage attached to the top of the broomstick! The Japanese, with over 2000 patents, are currently dominating the market in fuzzy products and applications. Dr. Tom Caudel (Boeing Computer Services, Boeing) gave a presentation on virtual reality. While sitting in their living room chairs, meeting participants of the future will be able to don a video mask and sensor gloves and participate in a computer generated meeting room with other participants around the world. Boeing is currently investigating use of virtual reality to design or modify an assembly. (This is a compilation from IEEE Institute, IEEE Spectrum and oral accounts from the participants.)

New IEEE Fellows

Congratulations to the following members of the Neural Networks community who have recently been named Fellows of the IEEE. The status of Fellow is awarded through an arduous evaluation process to members who have demonstrated outstanding contributions to the field. Only about 250 of the quarter million members of the IEEE are named as fellows each year. While many of the new fellows belong to several societies, the society listed completed the evaluation process.

- **Prof. James C. Bezdek**, Computer Science Department, University of West Florida, Pensacola, FL 32514

  For contributions to the theory and applications of classifier design and clustering algorithms using pattern recognition techniques based on fuzzy models. Systems Man and Cybernetics Society

- **Dr. Steven A. Boggs**, Director, Research & Business Development, Underground Systems Inc., 63 Pears Avenue, Toronto Ott Canada M5R 1S9

  For contributions to the understanding of the dielectric behavior of SF6 gas insulated substations. Dielectrics and Electrical Insulation Society

- **Prof. Ramalingam Chellappa**, Center for Automation Research, University of Maryland, College Park, MD 20742

  For contributions to statistical model based approaches for two- dimensional spectral analysis and image processing. Signal Processing Society

- **Dr. Joe Hong Chow**, 8 Heritage Parkway, Scotia, NY 12302

  For contribution to singular perturbation theory and its application to control and power systems. Control Systems Society

- **Mr. Richard F. Flam**, Flam and Russell, Inc., P. O. Box 999, Horsesham, PA 19044

  For contributions to the design and application of broadband microphones. Antennas and Propagation Society

- **Dr. Lawrence D. Jackel**, AT&T Bell Laboratories, Room 4D-433, Crawforfs Corner Road, Holmlde, NJ 07733

  For leadership in the applications of neural networks to pattern recognition and in the development of electronic systems implementing neural networks. Neural Networks Council

- **Professor Ramesh C. Jain**, Dept. of Elec. Eng. and Computer Science, The University of Michigan, Ann Arbor, MI 48109

  For contributions to computer vision in the estimation of structure and motion from images. Computer Society

- **Professor Abraham Kandel**, Dept. of Computer Sciences, and Engineering, Florida State University, 4202 East Fowler Avenue, Tallahassee, FL 32306

  For contributions to fuzzy set theory and its dissemination, and to the application of uncertainty management techniques to engineering systems. Systems Man & Cybernetics

- **Dr. Joseph W. Lachleitner**, Four Harding Terrace Fenwick Crest, Morristown, NJ 07961

  For contributions to the theory and practice of high-speed digital subscriber lines. Communications Society

- **Professor Ken-Chyuan Luo**, Dept. of ECE, Box 7911 North Carolina State Univ., Raleigh, NC 27695-7911

  For contributions to intelligent sensors and robotics. Industrial Electronics Society

- **Professor Rajinikant V. Patel**, Dept. of Electrical Engineering, Concordia University, 1455 De Maisonneuve Blvd., Montreal, Que., Canada H3G 1M8

  For contributions to the numerical analysis and design of control systems. Control Systems Society

- **Dr. Herbert E. Rauch**, 401 Oracena Lane, Los Altos, CA 94022

  For pioneering contributions to and leadership in the field of optimal estimation and control. Control Systems Society

- **Professor Edgar Sanchez-Sinoco**, 1812 Hondo Drive, College Station, TX 77843

  For contributions to monolithic analog filter design. Circuits and Systems Society

- **Professor Keng G. Shin**, Dept. of EECS, The University of Michigan, Ann Arbor, MI 48109

  For contributions to the theory of dynamic failure in real-time computing systems. Computer Society

On the Move

Russ Eberhart, the 1992 NNC President, and Pat Simpson, the 1992 NNC Vice President, Russ have both recently moved. Here's how to find them:

- Dr. Russell C. Eberhart, Director, Biomedical Engineering Research Triangle Institute PO Box 12194 Research Triangle Park NC 27709 USA Phone: 919-541-7123 Fax: 919-541-8746 E-mail: rce@rti.virginia.edu

- Dr. Pat Simpson, Director, Automation Corp. 701North ACMAn Signal Mountain Chattanooga, Tenn. 37377 (615) 886-7710 (H) 615 622 6442 (W) (615) 622 4625 (F) x448@ncdc12.ucsd.edu
Wanted by the IEEE: Authors and Reviewers

Stamatios V. Kartalopoulos
Chairman Publications Committee

The IEEE Press, for many years, has published books contributing to the International Scientific Community with state of the art information. Recently, the IEEE Press has taken a more active role in publishing in order to address not only the needs of the very advanced scientist but also the needs of the scientific community at large at different levels. Therefore, the IEEE Press considers not only reprint books, but also monographs, textbooks, and series books.

Moreover, the IEEE Press wants these books to meet the highest possible quality standards in both content and presentation of the book. With respect to quality of the presentation of a book, IEEE Press is fully equipped to meet this challenge, as already has been demonstrated. With respect to the quality of contents, IEEE’s membership has the best of the best. A book is authored and reviewed by the most qualified scientists in the field. In addition, IEEE Press has established royalties which are in line with the publishing industry.

IEEE Societies consist of specialized groups of scientists, who are experts in their fields of interest. Thus, Societies present a natural pool of potential authors and reviewers. Therefore, IEEE Press encourages a Society, or a Council such as our Neural Network Council, to sponsor a book to be published. If anyone of you is considering writing that book that was never written or published, it is never too late. Please, fill out the form and mail it today.

If anyone one of you would like to serve as a reviewer, your contribution will be appreciated and when the book is published, IEEE Press will send to you a complimentary copy. Remember, a Society functions as a Society only if its membership participate actively. Please, fill out the form and mail it today.

☐ Yes, I am interested
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FEBRUARY 1992
1991 IEEE Workshop on Neural Networks for Signal Processing

Jeng-Neng Hwang and Candace Kamm

Probabilistic (Gaussian/Gaussian mixture) global (feed-forward NN), higher order polynomial net), local (RBF, kernel discriminant), nearest neighbor (K-NN, LQV), and rule forming (binary decision tree, hypersphere). He concluded that these methods, except for a few exceptions, produce comparable estimates to the Bayes probability on an artifically designed two-category classification problem and comparable recognition accuracy on five different classification tasks (two artificial problems, two speech recognition tasks, one handwritten digit recognition task). He made several interesting observations, e.g., RBFs required much less training time than the back-propagation classifiers at the expense of much more storage.

Other interesting new ideas for using NNs for signal processing applications were reported in the Signal Processing Session on Wednesday afternoon. These new ideas included:

- A weighted order statistics NN filter based on threshold decompositions architecture (i.e., a stack filter).
- A surface reconstruction NN for object orientation estimation based on non-parametric methods.
- A simulated annealing competitive NN for speech recognition.

The proceedings of the workshop were published in the IEEE Workshop on Neural Networks for Signal Processing: Proceedings of the 1991 IEEE Workshop on Neural Networks for Signal Processing Conference, Catalog Number TH8353-5. A limited number of copies of the proceedings is available through the IEEE catalog.

The workshop was sponsored by the IEEE Neural Networks Council Newsletter.

CALLS FOR PAPERS

- IEEE International Symposium on Intelligent Control
  - April 3-13, 1992, Orlando, FL, U.S.A.
  - IEEE: 1992 Conference on Intelligent Control
  - Submissions: Four copies of papers should be sent before February 15, 1992 to: Thomas C. Henderson, Department of Computer Science, 3190 Merrill Engineering Building, The University of Utah, Salt Lake City, Utah 84112 USA Phone: (801) 581-3601 Fax: (801) 581-8483, E-mail: tch@cs.utah.edu.
- 2nd IEEE Workshop on Neural Networks for Signal Processing
  - August 31 - September 2, 1992, Copenhagen, Denmark.
  - Sponsor: The Computational Neural Network Center (CONNECT) and in cooperation with the IEEE Signal Processing Society.
  - Submissions: Four copies of extended summaries before February 15 to Program Chair, Dr. Aasted Soensens, Eletronica Institute Bldg. 349, Technical University of Denmark, DK-2800 Lyngby, Denmark, email: jaa@diht.ee.th.dk.
- Conference on Mathematical Aspects of Computer Vision
  - Submissions: Send one page abstract by March 1, 1992 to: Robert Carlson or Keith Phillips, Department of Mathematics, University of Colorado at Colorado Springs, Colorado Springs, Colorado 80935-1730 Carlson@vision.uccsc.edu or Keith@pyramid.uccsc.edu.
- Sixth page 250 475 625 800
- Classified: Quarter page 325 600 900 1000
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IEEE Council on Neural Networks Newsletter Advertising Rates

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- English of the paper. The author's name, return address, telephone for conference organizer must be included. Send to: Prof. Chongxi Feng, Dept. of Electrical Engineering, Tsinghua University Beijing 100084, China FAX: (861) 2564783.

  - Sponsor: Nanyang Technological University and the National University of Singapore. Advertisements will be typed.
  - Authors of the other subjects are invited to submit four copies of an extended abstract (300-500 words) to: Professor Yutakuya Takefuji, Dept. of Electrical Engineering, Case Western Reserve University, Cleveland, OH. 44106. Email: takufus@acm.eecs.cwru.edu.

- ICASSP'92 Conference Secretariat Associated Conventions and Exhibitions 204 Buik Tilam Road, #06-50 Boon Liew Building, Singapore 9223 Fax: (65) 313 IEEE Conference on Decision and Control, December 18-20, 1992, Westin LAX Hotel, Los Angeles, California.
  - Conference on Decision and Control, December 18-20, 1992, Los Angeles, California. Submissions: Four copies of extended abstracts by February 15 to: Thomas C. Henderson, Department of Electrical Engineering, University of Southern California, 4440 Aliso Street, Los Angeles, CA 90007 USA Phone/Fax (call before sending Fax) 919-284-1764 (FAX), email: tbs@mouse.csl.uiuc.edu.
- 8th Annual Allerton Conference on Communications Control and Computing, October 12-15, 1992, University of Illinois, Champaign, Coordinated Science Laboratory, 1101 West Springfield Avenue, Champaign, IL 61820 USA Phone: (217) 333-6000, Fax: (217) 442-0100.

- Visualization in Biomedical Computing, October 13-16, 1992, Chapel Hill NC, Sponsor: Dept. of Computer Science, Univ. of North Carolina, Chapel Hill.
  - Conference on Visualization in Medicine, October 13-16, 1992, Chapel Hill, NC. Submissions: Four copies of extended abstracts and a 50 word statement of major results by February 14, 1992 to: Dr. R. Richard Rob, Department of Biomedical Engineering, University of Kentucky, 912 Hanes Hall, University of Kentucky, 800 South Limestone Street, Lexington, KY 40506 USA Phone: (502) 852-4000, Fax: (502) 852-3200.

- 92: International Conference on Computer Technology, Beijing, China TCTC'92.
  - Sponsor: Chinese Institute of Electronics (CTB), China Institute of Communication (CC) and Tsinghua University.
  - Submission: Four copies of a 400 word summary in English of the paper. The author's name, return address, telephone for conference organizer must be included. Send to: Prof. Chongxi Feng, Dept. of Electrical Engineering, Tsinghua University Beijing 100084, China FAX: (861) 2564783.

- IEEE Council on Neural Networks Newsletter 10

FEBRUARY 1992 11
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Sponsored by IEEE Neural Networks Council
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IEEE Neural Networks Council Newsletter 12

CALL FOR PAPERS
1992 RNNS/IEEE Symposium on Neuroinformatics and Neurocomputing
Rostov-on-Don, USSR
October 7 - October 10, 1992

Jointly sponsored by the IEEE Neural Networks Council and the Russian Neural Networks Society, this symposium will explore the theoretical aspects of Neural Computation as well as the practical issues involved in implementation of these ideas.

Topics of particular interest include:
- Natural Neural Systems Informatio...
- Neurocomputers perspectives...
- Learning in Neural Networks...
- Program committee...
- Advisory Board...
- Manuscripts should be typed, double-spaced, no less than 11 pt. type, with a maximum length of 12 pages, and must be received by Dec. 31, 1991. Manuscripts submitted to formal restrictions will not be reviewed. Authors will be notified of acceptance by March 1, 1992, and will have 30 days to submit their paper copy. Because of anticipated difficulties in communication, poster papers are strongly encouraged, and authors are requested to indicate their preference for poster or oral presentation. Poster submissions will be reviewed to be on as high or higher standard than oral presentations. Authors outside the USSR should submit papers to: Dr. Wesley E. Snyder Department of Radiology, New York University, 1005 Fifth Avenue, New York, NY 10018 USA, fax 212-224-2420.

IEEE USA, FAX 313 986 9356. Ph. 313 985 1466.


August 4-7, 1992, International Conference on Control and Robotics, Vancouver, Canada. Sponsor: International Association of Science and Technology for Development. Contact: Prof. C. C. Ma, Dept. of Electrical Engineering, University of British Columbia, Vancouver, B.C., Canada.

August 30-Sep 3 IAPR: 11th International Conference on Pattern Recognition, The Hague, Netherlands. Sponsor: International Association for Pattern Recognition.
FEES:
1. Police academy graduates are fuzzified.
2. Roulette wheels are fuzzy dice.
3. The relaxation command: 'fuzz out'.
4. Roulette wheels are fuzzy dice.
5. Lotfi Zadeh is 'the Wizard of Fuzz'.
6. Police academy graduates are fuzzified.
7. Roulette wheels are fuzzy dice.
8. The relaxation command: 'fuzz out'.
9. Police academy graduates are fuzzified.
10. Roulette wheels are fuzzy dice.
11. The relaxation command: 'fuzz out'.
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15. Police academy graduates are fuzzified.
16. Roulette wheels are fuzzy dice.
17. The relaxation command: 'fuzz out'.
18. Police academy graduates are fuzzified.
19. Roulette wheels are fuzzy dice.
20. The relaxation command: 'fuzz out'.

FUZZIERS
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2. Roulette wheels are fuzzy dice.
3. The relaxation command: 'fuzz out'.
4. Academician proponents are 'Fuzzifiers'.
5. Lorfi Zadeh is 'the Wizard of Fuzz'.

Courtesy(?) Bob Marks

NEUROCOMPUTING

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SCOPE OF THE JOURNAL
NEUROCOMPUTING publishes articles describing fundamental contributions in the field of neurocomputing. Theory, practice, and applications are the essential topics.

Theoretical contributions aimed at winning further understanding of neural networks and massively parallel architectures, including analysis of network dynamics, theory of learning, biological neural network modeling, sensory motor transformations, and interdisciplinary topics with neurobiology, cognitive science, and artificial intelligence are emphasized.

Papers are included on advances in hardware and software development environments for neurocomputing including simulation software environments, emulation hardware architectures, models of concurrent computation, neuroprocessors, and neurochips (digital, analog, optical, and biodevices) covering practical aspects of the field.

Applications in different fields include signal processing, image processing, computer vision, pattern recognition, adaptive control, process control, robotics, optimization, automatic resource allocation, and financial forecasting. Special attention is given to classification of network types for specific tasks. NEUROCOMPUTING reports on the status of neurocomputing projects worldwide, and on meetings, conferences, workshops and seminars. Book reviews are also a feature.

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Subscription price: $271.00 / US $ 134.00
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ISSN 0925-2312

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CONFERENCE ANNOUNCEMENT

TOPICS

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

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IEEE Neural Networks Council Newsletter 14
Every new year brings its changes and surprises, but 1992 promises to bring more than its share.
Plans for the Russian Neural Networks Symposium in Rostov-on-Don are in full swing and on schedule. Our Russian colleagues are optimistic that the reforms will continue, and that although this winter will be a hard one, they and the citizens of the other former Soviet republics will come through. The Russians have done some outstanding theoretical work in neural networks over the past decades and as they obtain greater access to state-of-the-art technology and free interaction with their western colleagues, we can look forward to more exciting work.

Among the upcoming events in the US include the IJCNN'92 Baltimore in June and the first IEEE International Conference on Fuzzy Systems in San Diego in March. Plans for a second Fuzzy Systems in San Francisco are underway.

Plans are also proceeding rapidly for IJCNN-92 Beijing. Russ Eberhart, the new NNC president has been working closely with our Chinese colleagues.

On behalf of the Council I'd like to offer thanks to Mike Roth, who is stepping down as editor of the IEEE Transactions on Neural Networks. Rather than taking a well deserved rest after serving as NNC 1991 President, Bob Marks, is succeeding Mike as the third editor of the Transactions.

As the number of papers submitted to the Transactions and to the conferences continues to rise, so does the burden of reviewing them. When your colleagues on the editorial board or conference program committee send you papers to review, remember the Golden Rule: Review the papers thou art sent in as careful and timely a manner as thee wishes thy papers to be reviewed!

After having to reduce the type of the second newsletter to 9 point in order to squeeze everything in, we have expanded to 16 pages and adopted a quarterly publication schedule. This allows us to include conference and workshop reports such as the reports on the Singapore IJCNN and the IEEE Workshop on Neural Networks for Signal Processing as well as Council news, Calls for Papers, Calendar items, and ads (re advertising in the Newsletter, call Roz Snyder, the Managing Editor 919-922-1633, roz@mrips.bgsm.wfu.edu).