

科技资料

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NEURAL NETWORKS**

Vol. 2



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of 3

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IJCNN '91 SINGAPORE PROGRAM OVERVIEW

SUNDAY, 17th November

4.00 p.m. – 7.00 p.m. **Registration**

MONDAY, 18th November

8.00 a.m. – 5.30 p.m. **Registration**

9.00 a.m. – 11.00 p.m. **Tutorials**

- Tutorial 1: **Weightless Neural Nets**
- Tutorial 3: **Fuzzy Logic & Computational Neural Networks**
- Tutorial 5: **An Introduction To Neuronal — Morphology Of Biological Vision: A Basis For Neural — Vision (Machine Vision)**

11.00 a.m. – 1.00 p.m. **Tutorials**

- Tutorial 4: **Neural Computing & Pattern Recognition**
- Tutorial 7: **Successful Neural Network Parallel**

1.00 p.m. – 2.00 p.m. **Lunch Break**

2.00 p.m. – 4.00 p.m. **Tutorials**

- Tutorial 3: **Fuzzy Logic & Computational Neural Networks**
- Tutorial 8: **A Logical Topology of Neural Networks: Bringing Order Out Of Chaos**

4.00 p.m. – 6.00 p.m. **Tutorials**

- Tutorial 2: **Neural Computation: Transfer of Concepts from Brain Research to Novel Computer Designs**

6.30 p.m. – 7.00 p.m. **Welcome Reception**

7.00 p.m. – 8.00 p.m. **Public Lecture**
T. Sejnowski

TUESDAY, 19th November

7.30 a.m. – 5.30 p.m. **Registration**

8.00 a.m. – 9.00 a.m. **Plenary Session 1:**
T Kohonen

9.00 a.m. – 9.15 a.m. **Coffee Break**

9.15 a.m. – 12.15 p.m. **Technical Sessions:**

TUAMT1 : Technical Session 1
ASSOCIATIVE MEMORY (I)

TUAMT2 : Technical Session 2

NEUROCOGNITION (I)

TUAMT3 : Technical Session 3

HYBRID SYSTEMS (I)

TUAMT4 : Technical Session 4

SUPERVISED LEARNING (I)

TUAMT5 : Technical Session 5

APPLICATIONS (I)

9.00 a.m. – 12.00 p.m. **Poster Session:**

Poster 1

IMAGE PROCESSING/MATHS

12.15 p.m. – 1.15 p.m. **Lunch Break**

1.15 p.m. – 3.15 p.m. **Technical Sessions:**

TUPM1T1 : Technical Session 1

NEUROPHYSIOLOGY/INVERTEBRATE

TUPM1T2 : Technical Session 2

SENSATION AND PERCEPTION

TUPM1T3 : Technical Session 3

HYBRID SYSTEMS (II)

TUPM1T4 : Technical Session 4

SUPERVISED LEARNING (II)

TUPM1T5 : Technical Session 5

APPLICATIONS (II)

2.00 p.m. – 5.00 p.m. **Poster Session:**

Poster 2

SUPERVISED LEARNING

3.15 p.m. – 3.30 p.m. **Tea Break**

3.30 p.m. – 5.00/6.00 p.m. **Technical Sessions:**

TUPM2T1 : Technical Session 1

ELECTRICAL NEUROCOMPUTER (I)

TUPM2T2 : Technical Session 2

IMAGE PROCESSING (I)

TUPM2T3 : Technical Session 3

HYBRID SYSTEMS (III)

TUPM2T4 : Technical Session 4

SUPERVISED LEARNING (III)

TUPM2T5 : Technical Session 5

APPLICATIONS (III)

6.00 p.m. – 7.30 p.m. Financial Applications
of Neural Networks
Panel
Chairman: G Deboeck

WEDNESDAY, 20th November

7.00 a.m. – 5.30 p.m. Registration

8.00 a.m. – 9.00 p.m. Plenary Session 2:
Y. Nishikawa

9.00 a.m. – 9.15 a.m. Coffee Break

9.15 a.m. – 12.15 p.m. Technical Sessions:

WEAMT1 : Technical Session 1

OPTIMIZATION (I)

WEAMT2 : Technical Session 2

IMAGE PROCESSING

WEAMT3 : Technical Session 3

ROBOTICS (I)

WEAMT4 : Technical Session 4

SUPERVISED LEARNING (IV)

WEAMT5 : Technical Session 5

APPLICATIONS (IV)

9.00 a.m. – 12.00 p.m. Poster Session:

Poster 3

APPLICATIONS (V)

12.15 p.m. – 1.15 p.m. Lunch Break

1.15 p.m. – 3.15 p.m. Technical Sessions:

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MATHEMATICAL METHOD (1)

WEPM1T2 : Technical Session 2

MACHINE VISION

WEPM1T3 : Technical Session 3

SENSORIMOTOR CONTROL SYSTEMS

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SUPERVISED LEARNING (V)

WEPM1T5 : Technical Session 5

APPLICATIONS (V)

2.00 p.m. – 5.30 p.m. Poster Session:

Poster 4

ROBOTICS

HYBRID

3.15 p.m. – 3.30 p.m. Tea Break

3.30 p.m. – 6.00 p.m. Technical Sessions:

WEPM2T1 : Technical Session 1

NEUROCOMPUTER/ASSOCIATIVE MEMORY

WEPM2T2 : Technical Session 2

NEUROCOGNITION (II)

WEPM2T3 : Technical Session 3

UNSUPERVISED LEARNING (II)

WEPM2T4 : Technical Session 4

SUPERVISED LEARNING (VI)

WEPM2T5 : Technical Session 5

APPLICATIONS (VI)

5.00 p.m. – 6.30 p.m. Industry Panel Session:
Applied Neural
Networks Research at
the Boeing Company"
Chairman: Tom Caudell

7.00 p.m. – 10.00 p.m. IJCNN '91 Banquet

THURSDAY, 21st November

7.30 a.m. – 12.15 p.m. Registration

8.00 a.m. – 9.00 a.m. Plenary Session 3:
K S Narendra

9.00 a.m. – 9.15 a.m. Coffee Break

9.15 a.m. – 12.15 a.m. Technical Sessions:

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ELECTRICAL NEUROCOMPUTER (II)

THAMT2 : Technical Session 2

NEURO-DYNAMICS (I)

THAMT3 : Technical Session 3

ROBOTICS (II)

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SUPERVISED LEARNING (VII)

THAMT5 : Technical Session 5

APPLICATIONS (VII)

9.00 a.m. – 12.00 p.m. **Poster Session:**

Poster 5

NEUROCOMPUTERS

12.15 p.m. – 1.15 p.m. **Lunch Break**

1.15 p.m. – 3.15 p.m. **Technical Sessions:**

THPM1T1 : Technical Session 1

ASSOCIATIVE MEMORY (II)

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MATHEMATICAL METHOD (II)

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NEURO-DYNAMICS (II)

THPM1T4 : Technical Session 4

**SUPERVISED LEARNING/
UNSUPERVISED LEARNING**

THPM1T5 : Technical Session 5

APPLICATIONS (VIII)

2.00 p.m. — 5.00 p.m. **Poster Session:**

Poster 6

OPTIMISATION/ASSOCIATED MEMORY

3.15 p.m. – 3.30 p.m. **Tea Break**

3.30 p.m. — 6.00 p.m. **Technical Sessions:**

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OPTIMIZATION (II)

THPM2T2 : Technical Session 2

MACHINE VISION (II)

THPM2T3 : Technical Session 3

MATHEMATICAL METHOD (III)

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UNITED KINGDOM
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- SANDLER Yu M, Russian Center of
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USA
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 - WEN J, SCHWEITZER G, Inst. of Robotics, SWITZERLAND
- 0343 Polynomial Functions can be realized by Finite Size Multilayer Feedforward Neural Networks**
 - TODA Naohiro, FUNAHASHI Ken-Ichi, USUI Shiro, Toyohashi U. of Tech., JAPAN
- 0349 Behaviors of Transform Domain Backpropagation (BP) Algorithm**
 - YANG Xiahua, XUE Ping, Jiao Tong U., PR CHINA
- 0355 Analysis of Time Series by Neural Networks**
 - CHAN Derek Y C, PRAGER Dan, U. of Melbourne, AUSTRALIA
- 0361 A General Purpose Neurocomputer**
 - VERONA Francesco Bini, PINTO Pietro De, LAURIA Francesco E, Sette Marcello U. Degli Studi Di Napoli, ITALY
- 0367 Kernel Regression and Back Propagation Training with Noise**
 - KOISTINEN Petri, HOLMSTROM Lasse, Rolf Nevanlinna Inst., FINLAND
- 0373 A Dynamical Network Capable of Storing Sequences of Static or Periodic Patterns**
 - POTERYAIIKO Igor Yu, Moscow State U., USSR
- 0379 Time Series Prediction with Linear and Nonlinear Adaptive Networks**
 - COUGHLIN James P, Towson State U., USA, BARAN Robert, Naval Surface Warfare Center, USA

- 0385 Solving A Maximum Flow Problem using Back Propagation**
 - HEYMANS Bart C, ONEMA Joel P, USA
- 0390 Parameter Sensitivity in the Back Propagation Learning Algorithm**
 - MANAUSA Michael E, LACHER R C, Florida State U., USA
- 0396 Concept Formation and Statistical Learning in Nonhomogeneous Neural Nets**
 - TUTWILER Richard L, SIBUL Leon H, Pennsylvania State U., USA
- 0404 Forward Generating Neural Network : Its Architecture and Training**
 - LOW T S, CHAO B I, National U. of Singapore, SINGAPORE

TUPM1T1 1.15 p.m. - 3.15 p.m.

NEUROPHYSIOLOGY/INVERTEBRATE

- Chairmen:** MITSUO KAWATO, ATR Auditory & Visual, JAPAN
 MADAN M GUPTA, U. of Saskatchewan, CANADA
- INVITED:** MITSUO KAWATO ATR Auditory & Visual, JAPAN
- 0410 Models of Four Regions of Cerebellum**
- 0420 Single Neuron Dynamics : Noise - Enhanced Signal Processing**
 - BULSARA A. R., Naval Ocean Systems Center, USA; MOSS F. E., U. of Missouri
- 0426 Genetic Algorithms-Hints from Biology Science**
 - NIE Xiaosong, U. of Nebraska-Lincoln, USA
- 0430 Computational Modelling of Learning and Behaviour in Small Neuronal Systems**
 - SCUTT T W, DAMPER R I, U. of Southampton, UNITED KINGDOM

TUPM1T2 1.15 p.m. - 3.15 p.m.

SENSATION AND PERCEPTION

- Chairmen:** PETER A SANDON, Dartmouth College, USA
 MASANORI IDESAWA, RIKEN, JAPAN
- 0436 A Neural Network For Attentional Spotlight**
 - LEOW Wee Kheng, U. of Texas at Austin, USA, MIIKKULAINEN Risto, Microelectronics & Computer Tech., USA
- 0442 Fuzziness in 3-D Surface Depth Perception from its Boundary with Binocular Viewing**
 - IDESAWA Masanori, SHI Weifu, The Inst. of Physical & Chemical Research, JAPAN

- 0448 Autonomous Attentional Selection in SCAN**
 - POSTMA Eric O, JAAP VAN DEN HERIK H, HUDSON Patrick T W, U. of Limburg, NETHERLANDS
- 0454 Logarithmic Search in a Winner-Take-All Network**
 - SANDON Peter A, Dartmouth College, USA
- 0460 The Recognition of Basic Facial Expressions by Neural Network**
 - KOBAYASHI Hiroshi, HARA Fumio, Sci. U. of Tokyo, JAPAN
- 0467 Nonorthogonal Visual Image Coding by a laterally inhibitory Neural Network**
 - LI Xiaoping, Tsinghua U., PR CHINA
- 0473 Multilayered Neural Network Models for Color Blindness**
 - NAKAUCHI Shigeki, USUI Shiro, Toyohashi U. of Tech., JAPAN

TUPM1T3 1.15 p.m. - 3.15 p.m.

HYBRID SYSTEMS (II)

- Chairman:** J. BEZDEK, U. of West Florida, USA
- 0479 Efficient Question Answering in a Hybrid System**
 - DIEDERICH Joachim, German National Research Center, GERMANY; LONG Debra L, U. of California, USA
- 0485 Hybrid Cognitive Model of Conscious Level Processing and Unconscious Level Processing**
 - OKA, Natsuki, Matsushita Research Inst. Tokyo Inc., JAPAN
- 0491 A Cognitive Framework for Hybrid Systems**
 - WALLACE J G, BLUFF K, Swinburne Inst. of Tech., AUSTRALIA
- 0497 Evidential Reasoning using Neural Networks**
 - WANG Chua-Chin, DON Hon-Son, State U. of New York, USA
- 0503 Neural Network Models for Rule-Based Reasoning**
 - SUN Ron, Brandeis U., USA
- 0509 On the use of Hard Neural Networks for Symbolic Learning Application to Company Evaluation**
 - NOTTOLA Christian, CONDAMIN Laurent, Cellute Intelligence Artificial, France; NAIM Patrick, Auralog, FRANCE