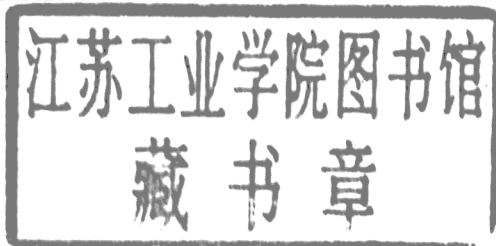


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2002 International Joint Conference
on Neural Networks

IJCNN'02

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Honolulu, Hawaii



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Welcome and Congratulations!

I want to welcome you to the 2002 IEEE World Congress on Computational Intelligence (WCCI), a forum that combines three key conferences: the International Joint Conference on Neural Networks (IJCNN), the Congress on Evolutionary Computation (CEC), and the IEEE International Conference on Fuzzy Systems (FUZZ-IEEE). Every four years we provide a common scientific forum for our three scientific communities to create new opportunities for cross-education and awareness of our related fields.

I also want to congratulate you, because you now have a *home*. On February 17, 2002, the IEEE Neural Network Council (NNC), which organized this forum in the past, became the IEEE Neural Network Society (NNS), the lead sponsoring entity of this year's congress. Individual members like you, representing the best of our technical and scientific communities, will be part of this new society. Probably, you are already familiar with some of our offerings, since you might have attended some of our past conferences (IJCNN, CEC, FUZZ-IEEE) or subscribed to one or more of our transactions (TNN, TEC, TFS). The IEEE NNS will further improve these educational products, while defining a professional identity that truly reflects your technical area of expertise.

As an attendee of WCCI 2002, you are now entitled to receive a free copy of our electronic newsletter, containing information about our society, calendar of events, review articles, and other items of interest. We would also like to extend to you an invitation to become a member of the Neural Network Society for 2003. Our yearly membership fee of \$10.00 for IEEE members or IEEE affiliates will allow you to take full advantage of our high-quality educational product offerings. Next year's membership benefits will include a newsletter, limited access to our electronic publications, and the opportunity of buying all three transactions (TNN, TEC, TFS) at a bundled price of \$50.00 (an \$18.00 discount). As a member, you may also have an active participation in the operations of the Neural Network Society, by running for an AdCom representative position, nominating candidates, and voting for the candidates. Membership renewal for 2003 will start around September 2002.

We look forward to your participation in our new society, and we are certain that the IEEE Neural Network Society will continue to grow and provide you with the best educational and professional services that you deserve.

Sincerely

Piero P. Bonissone
IEEE Neural Network Society
President 2002

A Message from the General Chairman

2002 IEEE World Congress on Computational Intelligence

Aloha! Welcome to the 2002 IEEE World Congress on Computational Intelligence (WCCI2002), a joint meeting of the 2002 International Joint Conference on Neural Networks (IJCNN2002), the 2002 Congress on Evolutionary Computation (CEC2002), and the 2002 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE2002). These meetings are sponsored by the IEEE Neural Networks Society, the International Neural Networks Society, the IEEE, and the Evolutionary Programming Society. We have the opportunity once every four years to bring these three major conferences together in a single location and time, to foster technology transfer across all areas of computational intelligence and build long-lasting relationships with our colleagues. It's my pleasure to be the general chairman of this third World Congress on Computational Intelligence, held at the Hilton Hawaiian Village Hotel, in Honolulu, Hawaii, USA, on the Island of Oahu, known as "the gathering place."

WCCI2002 features over 1150 papers from scientists, practitioners, students, engineers, and other colleagues from around the globe. In addition, we are fortunate to have a series of outstanding plenary and special lecturers to share their knowledge with us over the week, as well as a very strong tutorial program to open WCCI2002 on Sunday, May 12, 2002. Although the final statistics are not available as I write this message, I expect that we will have participants from every major continent, a truly international representation, and an indication of the success that neural, evolutionary, and fuzzy computation is enjoying.

I would like to thank the many people who have helped ensure the success of WCCI2002. The program chairs, Lee Giles, Xin Yao, and Toshi Fukuda, and their technical co-chairs deserve particular mention, as do Don Wunsch and Piero Bonissone for their instrumental efforts in handling the technical programs for IJCNN2002 and FUZZ-IEEE2002. Mohamed El-Sharkawi, the vice general chairman, offered valuable assistance, and Tom Cholewo, our web system chair, was simply invaluable. Thanks are also owed to the other conference organizers, Russ Eberhart (proceedings), Mary Lou Padgett (tutorials), Charlie Robinson (plenary and special lectures), Tony Kuh (local arrangements), Simon Lucas and Bernhard Sendoff (competitions), and Slawo Wesolkowski (student grants), as well as the organizers of the numerous special sessions and tracks, the authors, and the program committee members who reviewed the submissions.

Of course, last and most importantly, I thank you for coming to WCCI2002. I hope that you find the conference both memorable and enjoyable, and I trust that it will serve as a foundation for our efforts going forward, united under our new banner of the IEEE Neural Networks Society.

Sincerely,

David B. Fogel
General Chairman
Natural Selection, Inc.
La Jolla, CA, USA

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Welcome to IJCNN2002!

It is a pleasure to report that we have an excellent program this year. We had 536 submitted papers, with 451 accepted, for an acceptance rate of 84%. These numbers are in line with our goals before the meeting. In addition, we have an exciting program of Special Sessions, including: Neuroinformatics, Advances in ART Neural Network Theory and Applications, CNN Computing and Topographic Array Microprocessors, Artificial Neural Networks for Environmental Data Processing and Interpretation, Advances in Independent Component Analysis, Application of Computational Intelligence in Aerospace Industry, Video Compression via Radio, Control of Multiple Autonomous Agents, Context- and Experience-Dependence in the Dynamics of Perception and Decision, Intelligent Signal Processing for Wireless Communications, Neural Network Applications for Industrial Power Systems, and the panel, "Oh sure, my method is connectionist too. Who said it's not?"

Our contributed papers are no less compelling. We received sufficient high-quality submissions to construct sessions that have not typically been part of IJCNN, such as Bioinformatics, Graph Theory and Neural Networks, Differential and Computational Geometry in Neural Networks, Intrusion Detection/Computer Security, Power Systems, Chemical and Petroleum Industry Applications, Medical Applications, Military and Security Applications, Human-Computer Interaction, Agents, Games and Internet Applications, Auto Industry Applications, Consumer Electronics and Handheld Computing, Face Recognition, Bayesian and Probabilistic Methods, and Telecommunications. In addition, you will find sessions in the topics you have come to expect from IJCNN, and a stimulating poster session as well. We have been increasing the visibility of poster sessions in recent years, and this year all poster sessions are plenaries.

Furthermore, those who are interested in financial applications will be delighted that Conference on Computational Intelligence for Financial Engineering (CIFER) has joined forces with WCCI this year, and many of the CIFER papers were taken from IJCNN submissions.

So, get ready to learn, connect, and be fascinated. This may well be your favorite IJCNN to date. Work hard, and get plenty of stimulating ideas to present at IJCNN2003 next year, in July 2003, Portland Oregon.

Don Wunsch
Technical Program Co-Chairman, IJCNN2002

IJCNN '02

TABLE OF CONTENTS

Special Track 275: Neuroinformatics 1

Monday, May 13, 8:00am-9:20am, Honolulu 2

Chair: E. Micheli-Tzanakou

Three-Dimensional Structure of Synapses in the Brain and on the Web	1
John C Fiala	

Session 110: Radial Basis Functions I

Monday, May 13, 8:40am-9:20am, South Pacific Ballroom 1

Chair: TBA

Networks with Input Gates for Situation-Dependent Input Selection in Reinforcement Learning	5
Junichi Murata, Masafumi Suzuki, and Kotaro Hirasawa	

A Hybrid Learning RBF Neural Network For Human Face Recognition with Pseudo Zernike Moment Invariant	11
Javad Haddadnia, Majid Ahmadi, Karim Faez	

Session 115: Neurobiology & Neural Modeling I

Monday, May 13, 8:00am-9:20am, South Pacific Ballroom 4

Chair: TBA

Use of Top-down Signals for Restoring Partly Occluded Patterns	17
Kunihiko Fukushima	
An auditory system for efficient coding of natural sounds	23
Shin-ichi Maeda and Shin Ishii	

Session 100: Robotics I

Monday, May 13, 8:00am-9:20am, Sea Pearl Suite 1

Chair: TBA

A Neurocognitive Approach to Self-organisation of Verb Actions	29
Mark Elshaw and Stefan Wermter	
Two Recurrent Neural Networks for Grasping Force Optimization of Multi-fingered Robotic Hands	35
Lo-Ming Fok and Jun Wang	
Bi-criteria Kinematic Control of Redundant Manipulators Using a Dual Neural Network	41
Yunong Zhang and Jun Wang	
A Novel Neuro-Based Model Reference Adaptive Control For A Two Link Robot Arm	47
Mohammad B. Menhaj, and Mojtaba Rouhani	

Session 105: Speech Processing

Monday, May 13, 8:00am-9:20am, Sea Pearl Suite 2

Chair: DeLiang Wang

Application of Knowledge-based Cascade-correlation to Vowel Recognition	53
François Rivest, Thomas R. Shultz	
A Comparative Study of Statistical Ensemble Methods on Mismatch Conditions	59
Ke Chen and Dingsheng Luo	
Speech Recognition Using Modified Fuzzy Hypersphere Neural Network	65
D.D.Doye, U.V.Kulkarni and T.R.Sontakke	
On Amplitude Modulation for Monaural Speech Segregation.....	69
Guoning Hu and DeLiang Wang	

Special Track 276: Neuroinformatics 2

Monday, May 13, 9:30am-10:50am, Honolulu 2

Chair: Shiro Usui

Realistic Modeling Applied to Cerebellar Function	75
Eric De Schutter	
Neuronal Signal Processing in Parkinson's Disease.....	77
E. Micheli-Tzanakou, P. Wojnicki and J. Hamilton	

Session 118: Chemical and Petroleum Industry Applications

Monday, May 13, 9:30am-10:50am, Honolulu 3

Chair: TBA

Monitoring and Characterization of Combustion Flames by Generalized Hebbian Learning	82
D. Sbarbaro, A. Zawadsky, and O. Farias	
Inference of Distillation Column Products Quality Using Bayesian Networks	86
C. Hall Barbosa, B. Melo, M. Vellasco, M. Pacheco and L.P. Vasconcellos	
Application of a MLP Neural Network for Compensation of Distortions In Strain Gauges Measurements Due to Temperature Variations in Offshore Operation of a Flexible Pipe-Lay Vessel.....	92
C. Hall Barbosa, G. S. Kühner, E. Andrade Lima, M. Vellasco and M. Pacheco	
Hybrid Neural Network/Conventional Control of a Benchmark Process Control Problem	97
Peggy Israel Doerschuk, David Oakes Doerschuk, Eric Sarrafian and Mahdi Mekic	

Session 111: Radial Basis Functions II

Monday, May 13, 9:30am-10:50am, South Pacific Ballroom 1

Chair: TBA

A Novel Method for Improving the Classification Capability of Radial Basis Probabilistic Neural Network Classifiers	102
De-Shuang Huang and Wenbo Zhao	

From the Spherical to an Elliptic Form of the Dynamic RBF Neural Network Influence Field.....	107
Ryad Zemouri, Daniel Racocanu and Nouredine Zerhouni	
Classification of Objects in Residential Monitoring Systems	113
Srinivas Gutta and Vasanth Philomin	
 Session 116: Neurobiology & Neural Modeling II	
<i>Monday, May 13, 9:30am-10:50am, South Pacific Ballroom 4</i>	
<i>Chair: TBA</i>	
Frequency Response Analysis of an Artificial Neural Network Modeling the Lamina Ganglionaris of Musca Domestica	118
Karen G. Haines, John A. Moya and Thomas P. Caudell	
Latent Attractor Selection in the Presence of Irrelevant Stimuli.....	124
Simona Doboli and Ali A. Minai	
Dynamical Neuro-Representation of an Immune Model and its Application for Data Classification	130
Shahidul Pramanik, Robert Kozma and Dipankar Dasgupta	
Computational examination on the dynamics of recall activity in the inferior temporal cortex	136
Atsuo Suemitsu, Shigemitsu Morokami, Kazuhiko Murata and Masahiko Morita	
 Session 101: Graph Theory & Neural Nets	
<i>Monday, May 13, 9:30am-10:50am, Sea Pearl Suite 1</i>	
<i>Chair: Robert Kozma</i>	
Graph Isomorphisms Effect Structure Optimization of Neural Networks	142
Christian Igel and Peter Stagge	
Modifications of Discrete Hopfield Neural Optimization in Maximum Clique Problem	148
Doosung Hwang and Farshad Fotouhi	
Recursive Processing of Cyclic Graphs	154
Monica Bianchini, Marco Gori, and Franco Scarselli	
 Session 106: Control	
<i>Monday, May 13, 9:30am-10:50am, Sea Pearl Suite 2</i>	
Application of Neural Classifier for Flat Image Recognition In the Process of Microdevice Assembly	160
Baidyk Tatyana and Kussul Ernst	
A Hybrid Maximum Error Algorithm with Neighborhood Training for CMAC	165
Selahattin Sayil and Kwang Y. Lee	
Stochastic Learning Control for Nonlinear Systems	171
E. Gómez-Ramírez, P. Lotfi Najim and E. Ikonen	

A Lagrangian Network for Multifingered Hand Grasping Force Optimization	177
Wai Sum Tang and Jun Wang	

Session 113: Bioinformatics I

Monday, May 13, 1:30pm-2:50pm, Coral Ballroom 2

Chair: A. TBA

Modelling Gene Regulatory Data Using Artificial Neural Networks	183
Ed Keedwell, Ajit Narayanan and Dragan Savic	

A Kohonen Self-Organizing Map for the functional classification of proteins based on one-dimensional sequence information	189
Robert Pollock, Toby Lane and Michael Watts	

Bayesian Neural Network for Microarray Data	193
Yulan Liang, E. Olusegun George and Arpad Kelemen	

Gene expression classification using optimal feature/classifier ensemble with negative correlation.....	198
Jungwon Ryu and Sung-Bae Cho	

Session 277: Neuroinformatics 3

Monday, May 13, 1:30pm-2:50pm, Honolulu 2

Chair: Eric De Schutter

Neuroinformatics in vision: VISIOME Platform	204
Shiro Usui	

Internetplattform Neuroinformatik - A Pilot Study for the OECD Neuroinformatics Portal	209
Raphael Ritz, Rainer Forster, Andreas Herz	

Session 112: Ensemble Learning I

Monday, May 13, 1:30pm-2:50pm, South Pacific Ballroom 1

Chair: TBA

Selecting Features for Neural Network Committees.....	215
A. Verikas, M. Bacauskiene and K. Malmqvist	

An Experimental Comparison of Ensemble Learning Methods on Decision Boundaries.....	221
Yong Liu, Xin Yao, Qiangfu Zhao, and Tetsuya Higuchi	

Input Partitioning to Mixture of Experts.....	227
Bin Tang, Malcolm I. Heywood, and Mike Shepherd	

Meta Neural Networks as Intelligent Agents for Diagnosis	233
Maurice Cohen and Donna Hudson	

Session 102: Computational Geometry and Neural Networks

Monday, May 13, 1:30pm-2:50pm, Sea Pearl Suite 1

Chair: TBA

A Study of the Relationship Between Support Vector Machine and Gabriel Graph	239
Wan Zhang and Irwin King	

On model selection and the disability of neural networks to decompose tasks	245
Marc Toussaint	

Geometric Neurocomputing for Visually Pose Recognition	251
Eduardo Bayro-Corrochano, Refugio Vallejo	

Session 107: Supervised Learning I

Monday, May 13, 1:30pm-2:50pm, Sea Pearl Suite 2

Chair: TBA

Pruning Product Unit Neural Networks.....	257
A Ismail and AP Engelbrecht	

Removing Decision Surface Skew Using Complimentary Inputs	263
Timothy L. Andersen	

Recursive Cascade Correlation for Contextual Processing of Structured Data	268
Alessio Micheli, Diego Sona and Alessandro Sperduti	

Sequential Monte Carlo Learning with Hyperparameter Adjustments	274
K.Wada,K.Yosui,Y.Nakada,and T.Matsumoto	

Session 114: Bioinformatics II

Monday, May 13, 3:00pm-5:00pm, Coral Ballroom 2

Chair: Embrechts

Prediction of Protein Secondary Structure by Multi-Modal Neural Networks	280
Hanxi Zhu, Ikuo Yoshihara and Kunihiro Yamamori	

Multi-domain Gating Network for Classification of Cancer Cells Using Gene Expression Data	286
Min Su, Mitra Basu and Amadou Toure	

Normalization of cDNA Microarray Data By Using Neural Networks	290
Chao Deng, Peisen Zhang, Aili Wang, Brian J. Trummer and Denong Wang	

The Benefit of Intrinsic Disorder Information in Neural Network Prediction of Calmodulin Binding Targets	296
Timothy R. O'Connor, J. David Lawson and A. Keith Dunker	

Tissue Classification Through Analysis of Gene Expression Data Using a New Family of ART Architectures	300
Rui Xu, Georgios C. Anagnostopoulos and Donald C. Wunsch II	

Stripmining For Molecules	305
Mark J. Embrechts, Fabio Arciniegas, Muhsin Ozdemir, Michinari Momma, Curt M. Breneman, Larry Lockwood, Kristin P. Bennett, and Robert H. Kewley	

Session 117: Power Systems

Monday, May 13, 3:00pm-5:00pm, Honolulu 2

Chair: TBA

Scheduling of PID controllers by means of a Neural Network With Application to a Solar Power Plant.....	311
J. Henriques, P. Gil, A. Cardoso and A. Dourado	
Model-Based Incipient Fault Diagnosis - Multi-Step Neuro-Predictors and Multi-Resolution Signal Processing	317
Alexander G. Parlos and Kyusung Kim	
ANN Approach Applied to Combined Economic and Emission Dispatch for Large-Scale System	323
N.Kumarappan, M.R.Mohan and S.Murugappan	
Transient Stability Control Decision by Compound Neural Network	328
Yutian Liu, Fei Lin and Xiaodong Chu	
Refind Simulated Annealing Method for Solving Unit Commitment Problem.....	333
C.Christober Asir Rajan, M.R. Mohan and K. Manivannan	
Multi-Layer Feed-Forward Modular Network for Induction Motor.....	339
Pradeep Chatterjee, B.M. Karan and P.K. Sinha	

Special Session 255: Intelligent Signal Processing for Wireless Communications

Monday, May 13, 3:00pm-5:00pm, Honolulu 3

Chair: Payman Arabshahi

Best Effort Adaptive Routing in Statistically Accurate Sensor Networks	345
Clayton M. Okino and M.G. Corr	
Adaptive-SDR: Adaptive Swarm-based Distributed Routing	351
Ioannis Kassabalidis, Mohamed A. El-Sharkawi, Robert J.Marks II, Payman Arabshahi and Andrew A. Gray	
Distributed Topology Control Algorithm for Multihop Wireless Networks.....	355
Steve A. Borbash and Esther H. Jennings	
On the performance of swarm routing utilizing light-weight agents	361
Clayton M. Okino	
On the Lifetime Extension of Energy-Efficient Multihop Broadcast Networks	365
Intae Kang and Radha Poovendran	
Maximizing Lifetime in an Energy Constrained Wireless Sensor Array using Team Optimization of Cooperating Systems.....	371
Robert J. Marks II, Arindam K. Das, Mohamed El-Sharkawi, Payman Arabshahi and Andrew Gray	

Special Session 210: CIFER: Time Series Modeling and Forecasting 1

Monday, May 13, 3:00pm-5:00pm, South Pacific Ballroom 1

Chair: Nabeel Murshed

Forecasting Real Time Financial Series	377
Min Qi	
Forecasting Time Series by Bayesian Neural Networks.....	382
Tieling Zhang, Arkira Fukushima	
Pareto Multi-Objective Non-Linear Regression Modelling to Aid CAPM Analogous Forecasting.....	388
Jonathan E. Fieldsend and Sameer Singh	
Motivation for a Genetically-Trained Topography-Preserving Map	394
James S. Kirk and Jacek M. Zurada	
Adaptive Multiresolution Filtering to Forecast Nonlinear Time Series.....	400
Eduardo Gomez-Ramirez and X. Vilasis-Cardona	

Special Session 225: Artificial Neural Networks for Environmental Data Processing and Interpretation

Monday, May 13, 3:00pm-5:00pm, South Pacific Ballroom 2

Chair: P. Burrascano and F. C. Morabito

Neural Blind Separation for Electromagnetic Source Localization and Assessment	406
L. Albin, P. Burrascano, E. Cardelli, A. Faba and S. Fiori	
Redundancy reduction in Environmental Data Set by means of an Unsupervised Neural Networks.....	412
E. Chiarantoni, S. Vergura and G. Fornarelli	
Constructive MoG Neural Networks for Pollution Data Forecasting	417
M. Panella, A. Rizzi, F.M. Frattale Mascioli, and G. Martinelli	
Neural Network models to forecast hydrological risk	423
B. Cannas, A. Fanni, M. Pintus and G. M. Sechi	
Evaluation of neural network techniques in predicting and minimizing the mass of soil wastes in a sugar-beet harvesting season.....	427
G. Tummarello, F. Piazza, G. Riva and G. Toscano	
Wavelet Neural Network Processing of Urban Air Pollution	432
F. C. Morabito and M. Versaci	
Subband Neural Networks for Noisy Signal Forecasting and Missing Data Reconstruction.....	438
Aurelio Uncini and Gianandrea Cocchi	

Special Session 230: Advances in Independent Component Analysis

Monday, May 13, 3:00pm-5:00pm, South Pacific Ballroom 3

Chair: Erkki Oja and Juha Karhunen

MISEP - An ICA Method for Linear and Nonlinear Mixtures, Based on Mutual Information.....	442
L. B. Almeida	

Data augmentation using a combination of independent component analysis and non-linear time series prediction	448
T. Eltoft	
Two Approaches to Estimation of Overcomplete Independent Component Bases	454
M. Inki and A. Hyvarinen	
An Ensemble Learning Approach to Nonlinear Dynamic Blind Source Separation Using State-Space Models	460
H. Valpola, A. Honkela, and J. Karhunen	
Comparison of Lagrange Constrained Neural Network with Traditional ICA Methods	466
Harold Szu and Ivica Kopriva	
Temporal Factor Analysis (TFA): Stable-Identifiable Family, Orthogonal Flow Learning, and Automated Model Selection	472
L. Xu	

Session 103: Robotics II

Monday, May 13, 3:00pm-5:00pm, Sea Pearl Suite 1

Chair: TBA

Perception-Based Robotics Based on Perceiving-Acting Cycle with Modular Neural Networks	477
Naoyuki Kubota	
Adaptive Output Tracking of Partly Known Robotic Systems Using SoftMax Function Networks	483
Sisil Kumarawadu, Keigo Watanabe, Kazuo Kiguchi and Kiyotaka Izumi	
Self-Organization of Behavior Primitives as Multiple Attractor Dynamics: A Robot Experiment.....	489
Jun Tani	
Self-Organized Modulation of a Neural Robot Controller	495
Nicklas Bergfeldt and Fredrik Linåker	
A Simulator using Classifier Systems with Neural Networks for Autonomous Robot Navigation.....	501
Lubnen N. Moussi, Fernando J. Von Zuben, Ricardo R. Gudwin and Marconi K. Madrid	
Neuro-fuzzy Motion Control for Mobile Robot.....	507
Wu Wei, Jean Bosco Mbede and Yi Zhang	

Session 108: Supervised Learning II

Monday, May 13, 3:00pm-5:00pm, Sea Pearl Suite 2

Chair: TBA

A Memory Optimal BFGS Neural Network Training Algorithm	513
Seán F. McLoone, Vijanth S. Asirvadam and George W. Irwin	
A Note on Activation Function in Multilayer Feedforward Learning.....	519
Joarder Kamruzzaman and S.M.Aziz	