

FINAL PROGRAM
10th International Conference on Engineering
Applications on Neural Networks (EANN)
29-31 August 2007, Thessaloniki, Greece

The program in a glance

	Wednesday 29 August	Thursday 30 August	Friday 31 August
9.00-9.30	Opening Session		
9.30- 11.00	Plenary 1	Plenary 2	Plenary 3
11.00- 11.30	Coffee Break	Coffee Break	Coffee Break
11.30- 13.00	Session 1 Session 2	Session 7 Session 8	Session 13 Session 14
13.00- 13.30			Closing Session
13.30- 14.30	Lunch	Lunch	Lunch
14.30- 16.00	Session 3 Session 4	Session 9 Session 10	
16.00- 16.30	Coffee Break	Coffee Break	
16.30- 18.00	Session 5 Session 6	Session 11 Session 12	
21.00- 23.00		Gala Dinner	

Conference Sessions

Plenary Session 1: Invited Talk

Chair: Konstantinos Margaritis

Modal Learning in Neural Networks

Dominic Palmer-Brown

Plenary Session 2: Invited Talk

Chair: Nick Bassiliades

Towards Knowledge-based Neural Networks: at the Junction of Fuzzy Sets and Neurocomputing

Witold Pedrycz

Plenary Session 3: Invited Talk

Chair: Pantelis Angelidis

Applying PCA Neural Models for the Blind Separation of Signals

Konstantinos Diamantaras

Session 1: Monitoring and Diagnosis

Chair: Lazaros Iliadis

- Artificial Neural Networks for the Non Destructive Diagnosis of Concrete Structures
Barbara Cannas, Sara Carcangiu, Francesca Cau, Giovanna Concu, Alessandra Fanni, Pietro Testoni, Mariangela Usai
- Measures of Topological Relevance on the Self-Organizing Map: an Application to Spectrophotoscopic Modeling
Francesco Corona, Elia Liitiäinen, Amaury Lendasse, Roberto Baratti
- Local Anomaly Detection for Network System Log Monitoring
Pekka Kumpulainen, Kimmo Hätönen
- Dynamic Neural Networks for Prediction of Disruptions in Fusion Reactors
Augusto Montisci, Gabriele Murgia, M.Katiuscia Zedda, Alessandra Fanni, Barbara Cannas, Piergiorgio Sonato

Session 2: Production Scheduling and Control

Chair: Stephanos Spartalis

- Prediction of Distillate Yields in a Visbreaking Process by Neural Networks
Ombretta Foddi, Massimiliano Grosso, Stefania Tronci, Roberto Baratti
- Application of Reinforcement Learning for the Generation of an Assembly Plant Entry Control Policy
Evangelos Kehris, Dimitrios Dranidis

- Neural Network Based Product Formulation Models: Early Stopping Saves Training Time
Aaron Owens
- Neural Network Thermal Model of a Ladle Furnace
Patricia Sampaio, Antonio Braga, Takeshi Fujii

Session 3: Non Linear Systems Modelling

Chair: Aaron Owens

- Alternative Dynamic Network Structures for Non-linear System Modeling
Konstantinos Dimopoulos, Chandra Kambhampati
- Dimensionality Reduction Throught Unsupervised Features Selection
Sébastien Guérif, Younès Bennani
- Solving Nonlinear Algebraic Systems Using Artificial Neural Networks
Athanasios Margaris, Miltiadis Adamopoulos

Session 4: Medical Diagnosis Intelligent Systems

Chair: Roberto Baratti

- Breast Cancer Diagnostic Factors Elimination via Evolutionary Neural Network Pruning
Adam Adamopoulos
- Abdominal Pain Estimation in Childhood based on Artificial Neural Network Classification
Dimitrios Mantzaris, George Anastassopoulos, Adam Adamopoulos, Ioannis Stephanakis, Katerina Kambouri, Stefanos Gardikis
- A Knowledge-Based Artificial Neural Network for Pulmonary Embolism Diagnosis: Development and Conceptual Aspects
Gursel Serpen, Dilip Tekkedil

Session 5: Biomedical Engineering

Chair: Adam Adamopoulos

- Application of a New Algorithm, Iterative SOM, to the Deteccion of Gene Expressions
Marcos Lévano, Hans Nowak
- Hearing Aid System Using Basilar Hardware Membrane Model
Yoko Takase, Yugo Hayashi, Yoshifumi Sekine
- An Artificial Neural Network Model Simulating the Milk-ejection Reflex in the Sheep
Anastasia Tsingotjidou, Lazaros Iliadis, Efstratios Kosmidis, Christos Batzios, Georgios Papadopoulos

Session 6: Financial Forecasting

Chair: George Anastassopoulos

- A Hybrid Artificial Intelligence Approach to Monthly Forecasting of Crude Oil Price Time Series
Mohammad Reza Amin-Naseri, Ehsan Ahmadi Gharacheh
- Modelling of Municipal Creditworthiness by Clustering Methods
Petr Hájek, Vladimír Olej
- Weather Derivatives Pricing: Modeling the Seasonal Residual Variance of an Ornstein-Uhlenbeck Temperature Process with Neural Networks
Achilleas Zapranis, Antonis Alexandridis

Session 7: General Engineering Prediction and Modelling

Chair: Alessandra Fanni

- Functional Networks as a Novel Approach for Prediction of Permeability in a Carbonate Reservoir
Emad El-Sebakhy, Abdul Azeez .Abdulraheem, Mujahed Ahmed, Mohammed Rafiqul Awal
- Using Neural Networks for Predicting the Likelihood of Interference to Groundwave Users in the HF Spectrum
Haris Haralambous, Harris Papadopoulos, Lefteris Economou
- Application Methods for Self Organizing Map in Process Imaging for Dynamic Behavior of Aerated Agitation Vessel
Hideyuki Matsumoto, Ryuichi Masumoto, Chiaki Kuroda

Session 8: Data Mining

Chair: Ioannis Vlahavas

- Text Correction Using Approaches Based on Markovian Architectural Bias
Michal Čerňanský, Matej Makula, Peter Trebatický, Peter Lacko
- Hybrid Approach to Data Mining Radiological Medical Records
William Claster, Subana Shanmuganathan, Nader Ghotbi
- Updating of Road Network Databases: Spatio-temporal Trajectory Grouping Using Snap-Drift Neural Network
Frank Ekpenyong, Dominic Palmer-Brown, Allan Brimicombe

Session 9: Adaptive Control

Chair: Grigoris Tsoumakas

- Snap-drift ADaptive FUNction Neural Network (SADFUNN) for Pen-Based Recognition of Handwritten Digits
Miao Kang, Palmer-Brown Dominic
- Feed Forward Control of L-Methionine Using Sequential Adaptive Networks
Rajib Nayak, James Gomes

- Aerosol Optical Depth Retrieval by Neural Networks Ensemble with Adaptive Cost Function
Vladan Radosavljevic, Slobodan Vucetic, Zoran Obradovic

Session 10: General Engineering Identification, Classification and Control

Chair: Barbara Cannas

- Regional Day Type Identification For Algerian Electricity Load Using Kohonan Map
Farouk Benabbas, Mohamed Tarek Khadir, Damien Fay, Ahmed Boughrira
- Combining Experimental Data and Physical Simulation Models in Support Vector Learning
Gérard Bloch, Fabien Lauer, Guillaume Colin, Yann Chamaillard
- Development of Tools for Monitorization and Control of Multivariable Neurocontrolled Systems with Application to Distillation Columns
J. Fernandez de Canete, S. Gonzalez-Perez, P. Del Saz Orozco
- Identification of Aircraft Dynamics Using a New Approach to Neural Network-Based Modeling
Faranz Kermanshahi, Mehdi Mortazavi

Session 11: Fuzzy Logic and Systems

Chair: J. Fernandez de Canete

- A New Evaluation Framework for Artificial Neural Networks: Application in Industry
Lazaros Iliadis, Stefanos Spartalis, Stavros Tachos
- Linguistic Interpretation of Two Neuron Fuzzy Cognitive Maps
Athanasios Tsadiras
- A Fuzzy Decision Support System Evaluating Qualitative Attributes towards Forest Fire Risk Estimation
Theocharis Tsatalzinos
- Image Compression Based on a Novel Fuzzy Learning Vector Quantization Algorithms
George Tsekouras, Antonios Mamalis, Christos Anagnostopoulos, Dafni Economou, Damianos Gavalas

Session 12: Rural Decision Making

Chair: Stephanos Spartalis

- Comparative Analysis of Different Artificial Neural Network Approaches for Fir Trees Breast Height Form Factor Estimation
Maria Diamantopoulou
- Runoff modeling through Cascade Correlation and Back Propagation Artificial Neural Networks
Maria Diamantopoulou, Pantazis Georgiou, Dimitris Papamichail

- On-line Control of a Fed-Batch Fermentation by Using SOM Based Multiple Local Linear Models
Bedilu Abineh, Rajib Nayak, Amalendu Ranjan, James Gomes
- Artificial Neural Networks in Detection of Apples Damage
Tadeusz Kwater, Jacek Bartaman, Robert Pękala

Session 13: Colour/Image Analysis – Speech Synthesis

Chair: Athanassios Tsadiras

- Neural Network-Based Movie Dialogue Detection
Margarita Kotti, Emmanouil Benetos, Constantine Kotropoulos
- Colour Class Identification of Tracers Using Artificial Neural Networks
Robert Kuhn, Robert Bordas, Bernd Wunderlich, Bernd Michaelis, Dominique Thevenin
- A Language-Independent Neural Network-based Speech Synthesizer
Mario Malcangi, David Frontini
- Data Compression in Biometrics Images
Zbigniew Gomolka, Boguslaw Twarog, Bogdan Kwiatkowski

Session 14: Environmental Modelling and Prediction

Chair: *Gérard Bloch*

- Feature Extraction for Time Series Data: an Artificial Neural Network Evolutionary Training Model for the Management of Mountainous Watersheds
Thomas Glezakos, Fotis Maris, Theodoros Tsiligiridis, Constantine Yialouris, Konstantinos Ferentinos
- Modelling and Forecasting of Air Quality with the Aid of Machine
Kostas Karatzas
- Ensemble Selection for Water Quality Prediction
Ioannis Partalas, Evaggelos Hatzikos, Grigorios Tsoumakas, Ioannis Vlahavas
- Neural Modelling of the Tropospheric Ozone Concentrations in an Urban Site
Anastasia Paschalidou, Lazaros Iliadis, P Kassomenos, Christos Bezirtzoglou