Second International Workshop on Intelligent Systems Design and Applications

07 - 08 August 2002

Atlanta, USA

Wednesday, August 7, 2002
8:30 AM – 4:00 PM
Registration

Wednesday, August 7, 9:00 AM – 9:30 AM

Welcome Greetings

Wednesday, August 7, 9:45 AM – 10:45 AM (Plenary session)

Plenary Talk: "Fuzzy Differential Inclusions", V. Lakshmikantham

Parallel Sessions

Wednesday, August 7, 11:00 AM – 12:20 PM

Session 1: Neurocomputation and Applications
Chair: Seppo Karrila

11:00 AM   RBF Neural Networks for Classification Using New Kernel Functions
Hamparsum Bozdogan and Zhenqiu Liu

11:20 AM   A Performance Assessment of Bayesian Network Models as a Predictor of Breast Cancer Survival
Amy Moore and Albert Hoang

11:40 AM   Non-Linear Factor Analysis (NLFA) with Feedforward Networks Performs Non-Linear Data Reduction with Extraction of Linear Scores
Seppo Karrila

12:00 PM   Intelligent System Modelling and Simulation using Hybrid Recurrent Networks
                D. Al-Dabass, D. Evans and S. Sivayoganathan

Session 2: Neurocomputation and Applications
Chair: Baikunth Nath

11:00 AM   Fast adaptive control of a complex non-linear system by adalines: motion in a fluid under thruster
                power
                Gilles Labonté

11:20 AM   Control and Identification for Non-Linear Systems Affected by Noise Using Wavelet Network
                Smriti Srivastava, Madhusudan Singh and M. Hanmandlu

11:40 AM   Wavelet-Based Neural Net Application for Feature Detection and Classification
                Ajay Verma, Akif Ibragimov, Satheesh Ramachandran and Richard Mayer

12:00 PM   Neurocomputing Based Canadian Weather Analysis
                Imran Maqsood, Muhammad Riaz Khan and Ajith Abraham

Wednesday, August 7, 12:30 PM – 2:00 PM

Lunch

Wednesday, August 7, 2:00 PM – 3:00 PM (Plenary sessions)

Plenary Talk 1: "Block Iterative Methods for Reduced Systems of Linear Equations", D.J. Evans

Plenary Talk 2: "Resource Allocation Networks", P. Saratchandran

Parallel Sessions

Wednesday, August 7, 3:00 PM – 5:20 PM

Session 1: Fuzzy Systems and Intelligent Paradigms
Chair: Judy A Franklin

3:00 PM   Real Time Fuzzy Personalized Web Stock Information Agent
                Yanfei Wang, Yan-Qing Zhang, Saeid Belkasim and Raj Sunderraman

3:20 PM   An Algorithm of Fuzzy ISODATA Dynamic Clustering
                Cao Xiedong and Zhao Jinzhou

3:40 PM   Web-based Learning Evaluation Fuzzy Expert System
                Ramdane Issolah and Yan-Qing Zhang

4:00 PM   Comparison Theorem for Hybrid Fuzzy Differential Equations
                Abdelkrim Brania, Negash G Medhin and Masilamani Sambandham

4:20 PM   An Intelligent Method for Processing String in 3-D Based on its Minimum Energy
                Rahmat Budiarto, Abdullah Zawawi Hj Taib, Zaharin Yusoff and Masashi Yamada

4:40 PM   Nonlinear Credit Assignment for Musical Sequences
                Judy A. Franklin and Victoria Manfredi

5:00 PM	Impromptu: On-Demand Self-Servicing Software Framework *Ella Grishikashvili, M. Allen and A. Taleb-Bendiab*

Session 2: Hybrid Soft Computing & Other Intelligent Techniques
Chair: Ajith Abraham

3:00 PM	Web-based Fuzzy Neural Networks for Stock Prediction *Yu Tang, Fujun Xu, Xuhui Wan and Yan-Qing Zhang*
3:20 PM	A Neuro-Fuzzy System for Ash Property Prediction *Giovanna Castellano, Ciro Castiello, Anna M. Fanelli and Michele Giovannini*
3:40 PM	Performance Analysis of Connectionist Paradigms for Modeling Chaotic Behavior of Stock Indices *Ajith Abraham, Ninan Sajith Philip, Baikunth Nath and P. Saratchandran*
4:00 PM	A Hybrid Fuzzy-Neural Network for Modeling Short-Term Demand Forecasting in Czech Republic *Muhammad Riaz Khan and Ajith Abraham*
4:20 PM	Multi-Resolution Model Fusion For Corrosion Classification *Satheesh Ramachandran, Ajay Verma and Akif Ibragimov*
4:40 PM	HOLMES: A Prototype for the Targeted Research of Information about Hi-Tech Companies *Nicola Capuano, Matteo Gaeta1, Fabio Gasparetti and Alessandro Micarelli*
5:00 PM	Distogram: a translation -- and rotation --invariant and scale- covariant signature of a primitive shape *Geehyuk Lee and Misook Sohn*

Wednesday, August 7, 5:30 PM – 6:30 PM (Plenary sessions)

Plenary Talk 1:"Computational Web Intelligence: Intelligent Technology on Wired and Wireless Networks", Yan-Qing Zhang

Plenary Talk 2: "Computing, Dynamics, and the Third Way", Petros A. M. Gelepithis

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Thursday, August 8, 2002
8:30 AM – 4:00 PM
Registration

Thursday, August 8, 9:00 AM – 10:00 AM (Plenary sessions)

Plenary Talk 1: "Blow-up Time for a Parabolic Problem with a Nonlinear Source of Local and Nonlocal Features", C.Y. Chan and H.Y. Tian

Plenary Talk 2: "Hardware Description of a Neural Medical Classifier", M. P. Bekakos and S. G. Fountoukis

Parallel Sessions

Thursday, August 8, 10:00 AM – 12:20 PM

Session 1: Neurocomputation and Applications
Chair: Clara Pérez

11:00 AM   Intelligent System Design Using Artificial Neural Networks for Automatic Semantic units Extraction in Medical Literature
Clara Pérez

11:20 AM   A Block Based Cellular Neural Network Architecture for High Storage Capacity Pattern Recognition
Ming-Jung Seow and Vijayan K. Asari

11:40 AM   Designing a Neural Network with Gradient Flow
N. Del Buono

12:00 PM   Transforming Backpropagation Neural Networks to Decision Trees Using NN-DT Cascade Method
Milan Zorman, Peter Kokol and Bruno Stiglic

Session 2: Global Optimization Algorithms and Applications
Chair: P. Saratchandran

11:00 AM   Forecasting Solar Cycles with GP
M.A. Kaboudan

11:20 AM   Extremal Optimization: an Evolutionary Local Search Algorithm
Stefan Boettcher

11:40 AM   Simulated Annealing with Advanced Adaptive Neighborhood
Mitsunori Miki, Tomoyuki Hiroyasu and Keiko Ono

12:00 PM   Hybrid Genetic Algorithm with Exact Techniques applied to TSP
Carlos Alberto Rossel Jahuira

Thursday, August 8, 12:30 PM – 2:00 PM

Lunch

Thursday, August 8, 2:00 PM – 3:00 PM (Plenary sessions)

Plenary Talk 1: "Adapting Distributed Representations to incorporate new Concepts and Relations with Linear Relational Embedding", Alberto Paccanaro

Plenary Talk 2: "Numerical Calibration of Hydrogeological Model", Dan Kannan

Parallel Sessions

Thursday, August 8, 3:00 PM – 5:20 PM

Session 1: Global Optimization Algorithms and Applications
Chair: Tomoyuki Hiroyasu

3:00 PM   Memetic-Neural Scheduler of Jobs in Identical Parallel Machines
Tatiane R. Bonfim, Akebo Yamakami and Gisele C. Cardoso

3:20 PM   A Genetic Algorithm Approach to Automated Custom Document Assembly
Lisa Purvis

3:40 PM   A Genetic Algorithm for Multiobjective Optimization Problems with Fuzzy Constraints
Luciano de Moura and Akebo Yamakami

4:00 PM   MOGADES: Multi-Objective Genetic Algorithm with Distributed Environment Scheme
Jiro Kamiura, Tomoyuki Hiroyasu, Mitsunori Miki and Shinya Watanabe

4:20 PM   Temperature Parallel Simulated Annealing with Adaptive Neighborhood for Continuous Optimization Problem
Mitsunori Miki, Tomoyuki Hiroyasu, Masayuki Kasai, Keiko Ono and Takeshi Jitta

4:40 PM   DCMOGADES: Distributed Cooperation model of Multi-Objective Genetic Algorithm with Distributed Scheme
Tamaki Okuda, Tomoyuki Hiroyasu, Mitsunori Miki, Jiro Kamiura and Shinaya Watanabe

5:00 PM   Genetic Algorithm Based Product Mix and Material Match
Sk Ahad Ali, Robert de Souza and Zahid Hossain

Session 2: Intelligent Agents, Knowledge Discovery and Data Mining

Intelligent Agents
Chair: Simon Fong

3:00 PM   Dynamic Agent Population in Agent Based Distance Vector Routing
Kaizar A Amin and Armin R Mikler

3:20 PM   Mobile Robot Control Using Intelligent Agents
K. Figueiredo, M. Vellasco and M.A. Pacheco

3:40 PM   Applying the Multi-Agent Paradigm to Reconfigurable Hardware A Sensor Fusion Example
Hamid Reza Naji, John Weir and B. Earl Wells

4:00 PM   A Concept-based Model to Facilitate Automated Negotiation in Multi-agent Systems
Simon Fong and Sofia Zhung

Knowledge Discovery and Data Mining
Chair: Yan-Qing Zhang

4:20 PM   An Expectation Maximization Algorithm Working on Data Summary
Hui Dong Jin, Kwong Sak Leung and Man Leung Wong

4:40 PM   Unified Descriptive Language for Association Rules in Data Mining
Zahid Hossain and Sk. Ahad Ali

5:00 PM   Frames in the Human-Operator Behavior Analysis
                 Alexander M. Yemelyanov

Thursday, August 8, 5:30 PM – 6:30 PM (Plenary sessions)

Plenary Talk 1: "Nonstandard Finite Difference Schemes for a Nonlinear Diffusion Partial Differential Equation", Ronald E. Mickens

Plenary Talk 2: "3-D Adaptive Finite Element Mesh Generation", R. Montenegro et al

Thursday, August 8, 7:00 PM – 9:30 PM

Banquet