

GFS'05

Thursday

15:00 Registration

16:00 – 16:30 Opening

16:30 – 18:00 Session 1. Evolutionary learning and tuning of fuzzy rule-based systems I

Chairman: Plamen Angelov

Multiobjective Fuzzy Genetics-Based Machine Learning

H. Ishibuchi, Y. Nojima

Augmentation of TSK Fuzzy Controllers by Evolutionary Optimization

S. Hölemann, F. Hoffmann, D. Schauten

Multiobjective Evolutionary design of Fuzzy Systems

J. González, I. Rojas, H. Pomares, L.J. Herrera, A. Guillén

18:00 – 18:30 Coffee break

18:30 – 20:00 Session 2. Genetic Fuzzy Systems and Robotics

Chairman: Frank Hoffmann

Online tuning of a fuzzy controller in mobile robotics

M. Mucientes, A. Bugarín, S. Barro

Tuning a visual fuzzy system using SPEA2

R. Muñoz-Salinas, E. Aguirre, M. García-Silvente, A. González

Reinforcement Learning by an Accuracy-Based Fuzzy Classifier System with Real-valued Output

J. Casillas, B. Carse, L. Bull

21:00 Dinner at Monte Blanco Restaurant (bus transport from the workshop venue included)

Friday

9:00-10:00 Plenary Lecture

P.P. Bonissone

An Evolutionary Process for Designing and Maintaining a Fuzzy Instance-based Model (FIM)

10:00 – 10:30 Coffee break

10:30 – 13:00 Session 3. Genetic fuzzy systems for Data Mining and Knowledge Discovery

Chairman: Fernando Gomide

Intelligent Attributes using Genetic Fuzzy System for Decision Trees
J.F. Baldwin, S.B. Karale

Evolutionary Induction of Descriptive Fuzzy Rules in a Market Problem
M.J. del Jesus, P. González, F. Herrera, M. Mesonero

A Classifier System-Based Learning Algorithm for Interpretable, Adaptive Nearest Neighbour Classifier
F. Klawonn, K. Tschumitschew

A Multiobjective Evolutionary Fuzzy System for Promoter Discovery in E. Coli
R. Romero, O. Cordon, C. Rubio, I. Zwir

Evolving Computational Intelligence Systems
N. Kasabov, P. Angelov

13:00 – 15:00 Lunch

15:00 – 17:00 Session 4. Applications of genetic fuzzy systems

Chairman: Brian Carse

Genetic Algorithm, Fuzzy Clustering and Discrete Event Systems: An Application in Scheduling
F. Mota, R. Gonçalves, F. Gomide

Genetic Fuzzy systems in stand.alone photovoltaic systems
S. Garcia, J.C. Bago, J. Aguilera, J.R. Velasco, L. Magdalena

Automatic Design Generation of Component-based Systems using GA and Fuzzy Optimization
P. Angelov, Y. ZHANG, J. Wright

Optimization of an Autonomous Car Fuzzy Control System via Genetic Algorithms
J. Alonso, N. Serrano, T. de Pedro, C. Gonzalez, R. Garcia

17:00 – 17:30 Coffee break

17:30 – 19:30 Session 5. Evolutionary learning and tuning of fuzzy rule-based systemsII

Chairman: Jorge Casillas

A New Genetic Fuzzy System Based on Linguistic 2-Tuples to Learn Knowledge Bases
R. Alcalá, J. Alcalá-Fdez, F. Herrera, J. Otero

An Experiment with Local and Global Errors in Fuzzy Rules Extraction
A.R. de Soto, C.A. Capdevila, C.G. Testera, E. Cuervo

Evolutionary Strategies for Learning of Neuro-Fuzzy Systems
M. Gabryel, K. Cpalka, L. Rutkowski

Advocating the use of Imprecisely Observed Data in Genetic Fuzzy Systems
L. Sanchez, I. Couso

21:00 Dinner at Paco Restaurant

Saturday

9:30 – 11:30 Session 6. Genetic fuzzy systems and the interpretability-accuracy trade-off
Chairman: Ignacio Rojas

Evaluation and interpretability-preserving optimization of a fuzzy ordered classifier
E.V. Broekhoven, V. Adriaenssens, B. de Baets

Learning Fuzzy Rules using Genetic Programming: Context-free grammar definition for high-dimensionality problems
F.J. Berlanga, M.J. del Jesús, F. Herrera

Hierarchical FLS Design Using Multi-Agent Genetic Approach
I. Kallel, T.M. Jelleli, A.M. Alimi

Interpretability Enhancement of Fuzzy Modeling using Ant Colony Optimization
P. Carmona, J.L. Castro

11:30 – 12:00 Coffee break

12:00 – 13:15 Round Table about New Trends on Genetic Fuzzy Systems

13:15 – 13:30 Workshop Closure

13:30 – 15:30 Lunch

16:00 Visit to the Alhambra (bus transport from the workshop venue included)