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Call Papers:

Special Session on

"On-Line Fuzzy Modelling and Pattern Recognition"

to be organized at the Joint **EUSFLAT - LFA Conference 2011**
Aix-Le-Bains, France, 18.07.2011-22.07.2011

by the EUSFLAT working group on Machine Learning and Data Mining (DAMI)

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Important Dates:

- **January 15, 2011: Paper submission (through the conference website)**
- March 15, 2011: Notification of acceptance
- April 15, 2011: Full paper submission

Aim of the Session

The special session on **On-Line Fuzzy Modelling and Pattern Recognition** to be held as part of the EUSFLAT'2011 conference in Aix-les-Bains intends to focus on online learning scenarios in of fuzzy modelling and pattern recognition. Online learning in this context embraces two issues: (1) online and adaptive adjustment of system's parameters and (2) continuous evolution of the system's structure. These issues are indeed important for real-world data streams based systems facing situations like: (1) changing system dynamics, (2) changing/new operating conditions and (3) increase of the system states over time. The special session targets in particular fuzzy logic and pattern recognition methods which have the potential of processing data online. The special session will stand as a forum for discussing recent advances and novel research avenues.

Scope

Topics of interest include but are not limited to:

Novel on-line fuzzy modelling methods in the fields of

- Adaptive fuzzy regression and classification techniques
- Evolving fuzzy systems
- Evolving rule-based classifiers
- Evolving neuro-fuzzy systems
- Evolving type-2 fuzzy systems

Enhanced issues in on-line fuzzy modelling such as

- Techniques to address Concept Drift and Shift
- On-line feature selection and weighting approaches
- Stability, process-safety and computation aspects
- Interpretability Issues
- Active and semi-supervised learning

Fuzzy Sets and Methods in On-Line/Incremental Pattern Recognition Approaches

- Incremental/online fuzzy clustering techniques
- Incremental fuzzy pattern and decision trees
- Online hybrid fuzzy techniques for pattern recognition
- Online fuzzy classification
- Dynamic data-mining using fuzzy models

Real-World Applications

- On-Line Modelling and Identification,
- On-line Fault Detection and Quality Control
- Decision Support Systems
- Image Classification, Visual Inspection
- Robotics
- Control Systems
- Data Stream Mining and Adaptive Knowledge Discovery
- Forecasting in Financial Domains, Time-Series Prediction