



Special Session: Nature Inspired Methodologies for Feature Reduction and Function Approximation

Computational Intelligence (CI) has played significant role various in industrial applications such as pharmaceutical, medical, chemical, etc. Data generated or collected for modeling is a crucial aspect apart from the conventional experimental work carried-out in the industry. Often collected data need to be analyzed. In this case, CI tools helps in understanding and modeling collected data. For several applications, critical variables involved in the experimental process need to be determined. Hence, feature selection methods helps discovering these critical variables. This session is devoted to novel research featuring feature selection and function approximation in real world application problems.

This session will include (but is not limited to) the usage of nature inspired methodologies for:

Feature selection:

- Dimensionality reduction
- Feature weighting
- Feature ranking
- Subset selection
- Feature extraction/construction
- Feature selection methodology
- Integration with data mining algorithms
- Data streams and time series
- Selection in extremely high-dimensional domains
- Real-world case studies and applications

Function Approximation

- Neural networks
- Fuzzy neural networks
- Support vector machines and kernel methods
- Mixture models, ensemble learning, and other meta-learning or committee algorithms
- Hybrid learning methods
- Deep learning
- Brain-inspired cognitive architectures
- Collective intelligence
- Self-configuring systems
- Hybrid intelligent systems

Applications

- Pharmacy
- Bioinformatics
- Biomedical engineering
- Speech recognition and speech production
- Communications and computer networks
- Power system applications
- Financial engineering applications
- Manufacturing and industrial applications
- Clinical applications

Dates:

Paper submission due: August 21, 2015

Notification of paper acceptance: September 10, 2015

Final manuscript and registration due: September 25, 2015

Conference: December 01-03, 2015

Paper format and author instructions:

Please consult conference web site: <http://www.mirlabs.net/nabic15>

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