

FETOL 2013(call for papers in pdf)

Special Session on Fusion & Ensemble Techniques for Online Learning On Data Streams

at the Tenth International Conference on Flexible Query Answering Systems (FQAS 2013)

Granada, Spain, September 18-20, 2013

Conference web site: <http://idbis.ugr.es/fqas2013/>

FETOL 2013 web site: <http://kms.ii.pwr.wroc.pl/events/fetol2013/>

Objectives and topics

Machine learning methods aimed at processing data stream of mass data, online measurements as well as any other kind of dynamic data have been attracted a great attention of numerous researchers and practitioners in the last decade. Due to the fact that the available data frequently does not reflect all possible variations of modeled systems it has become necessary to devise different techniques to adapt model parameters and evolve their structures quickly and on-the-fly, thus to adjust them to on-line processing. Often, information coming from social networks, cloud computing, user context modeling or multi-agent systems can be also seen as dynamic data streams that should be employed to adapt existing, learnt models for information retrieval, semantic query expansion, learning of ontologies, text analysis and data mining. For instance, user's profiles are learnt from user's activity in the web or information retrieval systems, and they could be adapted online as new activity/searches are being performed.

During data stream processing and on-line modeling, the concept of incremental learning serves as an important engine to update models in block-wise or even sample-wise manner. For instance, in web mining and big data bases the number of samples is usually that huge that a batch processing, i.e. loading the complete data set at once and performing a conventional batch training step, is simply not possible (due to virtual memory overflow). Furthermore, re-training on block-wise portions of the whole data set may be stucked in local optima, thus resulting in suboptimal models, as older data is ignored and thus the particular dependencies, feature relations implicitly contained in these may be largely forgotten (also termed as catastrophic forgetting). On the other hand, when older information should be forgotten (as not valid any longer), evolving and adaptive methods also support methods for drift handling, also referred as 'dealing with concept drift'.

In our session, we would like to emphasize the usage of ensemble techniques whose performance can significantly exceed that of basic single models and which can be used in a distributed environment. The scope of the special session covers theoretical and practical aspects of fusion and ensemble approaches to on-line machine learning in a broad sense.

The scope of the FETOL 2013 includes, but is not limited to the following topics:

- Adaptive, incremental, and evolving learning
- Incremental feature selection, clustering, and classification
- Ensemble techniques and data fusion in dynamic environments
- Hybrid methods in prediction and classification
- Mining data streams using ensemble methods
- Methods of dealing with concept drift
- Evolving fuzzy systems
- Diversity, accuracy, interpretability, and stability issues
- Implementations and real-world applications such as
 - Information Retrieval and Fusion
 - Web Mining and Huge Data Bases
 - Multiple Sensor Networks
 - Cloud Computing
 - Social Networks and User Context Modeling
 - Data Mining and Text Analysis
 - Human-Machine Interaction
 - Multi-Agent Systems
 - Query Systems
 - And many more ...

Important dates

Submission of papers: **01 March 2013**

Notification of acceptance: **01 May 2013**

Camera-ready papers: **01 June 2013**

Conference date: **18–20 September 2013**

Sessionchairs

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Submission

All contributions should be original and not published elsewhere or intended to be published during the review period. Authors are invited to submit their papers electronically in pdf format, through EasyChair

<https://www.easychair.org/conferences/?conf=fetol2013>

Submitted papers should be prepared in Springer LNAI style and should not exceed 12 pages. To ensure high quality, all papers will be thoroughly reviewed by the FETOL 2013 International Program Committee. All accepted papers must be presented by one of the authors who must register for the conference and pay the fee. The conference proceedings will be published by Springer in the prestigious series LNCS/LNAI (indexed by ISI CPCI-S (included in ISI Web of Science), EI, ACM Digital Library, dblp, Google Scholar, Scopus, etc.).