ECML/PKDD 2015 Workshop on Advanced Analytics and Learning on Temporal Data

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CALL FOR PAPERS

http://ama.liglab.fr/aaltd_ecml2015/

2015 International Workshop on Advanced Analytics and Learning on Temporal Data (AALTD 2015) will be held Friday, September 11, 2015 in Porto, Portugal, co-located with ECML/PKDD 2015. The aim of this workshop is to bring together researchers and experts in machine learning, data mining, pattern analysis and statistics to share their challenging issues and advance researches on temporal data analysis. Analysis and learning from temporal data cover a wide scope of tasks including learning metrics, learning representations, unsupervised feature extraction, clustering and classification.

Temporal data are frequently encountered in a wide range of domains such as bio-informatics, medicine, finance and engineering, among many others. They are naturally present in applications covering language, motion and vision analysis, or more emerging ones as energy efficient building, smart cities, dynamic social media or sensor networks. Contrary to static data, temporal data are of complex nature, they are generally noisy, of high dimensionality, they may be non stationary (i.e. first order statistics vary with time) and irregular (involving several time granularities), they may have several invariant domain-dependent factors as time delay, translation, scale or tendency effects. These temporal peculiarities make limited the majority of standard statistical models and machine learning approaches, that mainly assume i.i.d data, homoscedasticity, normality of residuals, etc. To tackle such challenging temporal data, one appeals for new advanced approaches at the bridge of statistics, time series analysis, signal processing and machine learning. Defining new approaches that transcend boundaries between several domains to extract valuable information from temporal data is undeniably a hot topic in the near future, that has been yet the subject of active research this last decade.

Topics of Interest

The proposed workshop welcomes papers that cover, but not limited to, one or several of the following topics:

- Temporal data clustering
- Semi-supervised and supervised classification on temporal data
- Deep learning and learning representations for temporal data
- Metric and kernel learning for temporal data
- Modeling temporal dependencies
- Advanced forecasting and prediction models
- Space-temporal statistical analysis

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- Functional data analysis methods
- Temporal data streams
- Dimensionality reduction, sparsity, algorithmic complexity and big data challenge
- Bio-informatics, medical, energy consumption, applications on temporal data
- · Benchmarking and assessment methods for temporal data

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