2nd Workshop on

Incremental Classification, concept drift and Novelty detection

(IClaNov)

Shenzen – China – December 14, 2014

In conjunction with

International Conference on Data Mining
(ICDM 2014)

The development of dynamic information analysis methods, like incremental classification, concept drift management and novelty detection techniques, is becoming a central concern in a bunch of applications whose main goal is to deal with information which is varying over time. These applications relate themselves to very various and highly strategic domains, including web mining, social network analysis, adaptive information retrieval, anomaly or intrusion detection, process control and management recommender systems, technological and scientific survey, and even genomic information analysis, in bioinformatics.

The term "incremental" is often associated to the terms dynamics, adaptive, interactive, on-line, or batch. The majority of the learning methods were initially defined in a non-incremental way. However, in each of these families, were initiated incremental methods making it possible to take into account the temporal component of a data flow. In a more general way incremental clustering algorithms and novelty detection approaches are subjected to the following constraints:

• Possibility to be applied without knowing as a preliminary all the data to be analyzed;
• Taking into account of a new data must be carried out without making intensive use of the already considered data;
• Result must but available after insertion of all new data;
• Potential changes in the data description space must be taken into consideration.

This workshop aims to offer a meeting opportunity for academics and industry-related researchers, belonging to the various communities of Computational Intelligence, Machine Learning, Experimental Design and Data Mining to discuss new areas of incremental clustering, concept drift management and novelty detection and on their application to analysis of time varying information of various natures. Another important aim of the workshop is to bridge the gap between data acquisition or experimentation and model building.

The previous edition of the workshop IClaNov was a success. 10 papers were presented followed by fruitful discussions with a large audience. A call for papers for a book on the theme of the workshop was launched.

The set of proposed incremental techniques includes, but is not limited to:

• Novelty detection algorithms and techniques
• Adaptive hierarchical, k-means or density based methods
• Adaptive neural methods and associated Hebbian learning techniques
• Multiview diachronic approaches
• Probabilistic approaches
• Graph partitioning methods and incremental clustering approaches based on attributed graphs
• Incremental clustering approaches based on swarm intelligence and genetic algorithms
• Evolving classifier ensemble techniques
• Dynamic variable selection techniques
• Visualization methods for evolving data analysis results

The list of application domain is includes, but it is not limited to:

• Evolving textual information analysis

- Evolving social network analysis
- Dynamic process control and tracking
- Intrusion and anomaly detection
- Genomics and DNA micro-array data analysis
- Adaptive recommender and filtering systems
- Scientometrics, webometrics and technological survey

All accepted workshop papers will be published in formal proceedings by the IEEE Computer Society Press.

Important dates:

• Paper submission:	**August 10, 2014**
• Notification of acceptance:	**September 26, 2014**
• Camera-ready:	**October 20, 2014**
• ICDM 2014 Conference:	**December 14, 2014**

Important - Submission Guidelines:

- Please follow the regular submission guidelines of ICDM 2014 (paper submissions should be limited to a maximum of *8* pages) : http://icdm2014.sfu.ca/submission.html

- and use this link to submit your paper (IclaNov has the number 13 in the page):
  https://wi-lab.com/cyberchair/2014/icdm14/scripts/ws_submit.php

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Invited speaker:

- Zhi-Hua Zhou   - Nanjing University Nanjing   - China

Organizing committee:

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