

**The Twenty-fourth International Conference on
Industrial, Engineering and Other Applications of Applied
Intelligent Systems
(IEA/AIE 2011)**

**June 28 - July 1, 2011,
Syracuse University, NYS, USA**

Special Session:

**Incremental clustering and novelty
detection techniques
and their application to intelligent analysis
of time varying information**

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The development of dynamic information analysis methods, like incremental clustering 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 and adaptive information retrieval, user behaviour analysis and recommendation systems, technological and scientific survey, anomaly or intrusion detection, 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 family of these methods, were initiated incremental variants 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 be available after insertion of all new data;
- Potential change in the data description space must be taken into consideration.

The **goal of this special session** is to bring together researchers whose main topic is to work on innovative and challenging incremental clustering and novelty detection approaches and on their application to analysis of time varying information of various natures.

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

- Novelty detection algorithms and techniques
- Incremental density-based methods
- Adaptive hierarchical clustering methods
- Adaptive K-means/mobile centres methods
- Adaptive neural methods and associated Hebbian learning techniques
- Probabilistic approaches
- Graph partitioning methods and incremental clustering approaches based on attributed graphs
- Incremental clustering approaches based on swarm intelligence and genetic algorithms
- Visualization methods for evolving data analysis results

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

- Evolving textual information analysis,
- Genomics and DNA micro-array data analysis
- Intrusion and anomaly detection
- Adaptive recommendation and filtering systems
- Scientometrics and webometrics

Paper submission:

STANDARD papers, of up to 10 single spaced pages, will present the results of original research or innovative practical applications relevant to the conference.

Shorter works, up to 6 pages, to be presented in 10 minutes, may be submitted as SHORT PAPERS representing work in progress or suggesting possible research directions.

For the submission and reviewing process we are using the EasyChair Conference System. For submitting a new paper you will need an account on EasyChair. If you don't have such an account, please sign up [here](#). Follow the link after "if you do not have an EasyChair account or have problems to login".

Once you have your EasyChair account and have prepared your manuscript, please submit your paper [here](#).

Important dates:

Paper Submission Due	December 15, 2010
Notification of Acceptance	February 01, 2011
Final Camera Ready Form	February 28, 2011
Conference Date	June 28 - July 1, 2011

Committee of organization:

- [Jean-Charles LAMIREL](#) (INRIA [TALARIS Project](#) - LORIA, France)
- [Pascal CUXAC](#) ([SRDI-INIST](#) – CNRS, France)

Scientific committee:

- Bernard DOUSSET (IRIT, Toulouse, France)
- Wolfgang GLANZEL (Katholieke University, Leuven, Belgia)
- Bora I KUMOVA (Izmir Institute of Technology, Izmir, Turkey)
- Jung Chen CHIANG (NCKU, Tainan, Taiwan)
- Djamel ZIGHED (Louis Lumiere University, Lyon, France)
- Shadi AL SHEHABI (Aleppo University, Aleppo, Syria)
- Chaomei CHEN (Drexel University, Philadelphia, USA)
- Fazli CAN (Bilkent University, Ankara, Turkey)
- Dan TAMIR (Texas State University, San Marcos, USA)
- Dominic FOREST (EBSI Univ. Montreal, Montreal, Canada)
- Claire FRANCOIS (INIST – CNRS, France)
- Abdoulaye B. DIALLO (UQAM, Montreal, Canada)
- Nitesh CHAWLA (Notre Dame University, Indiana, USA)

Additional information:

Please contact [Jean-Charles LAMIREL \(lamirel\[at\]loria.fr\)](mailto:lamirel@loria.fr).

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