

## Call for Papers and Posters

### Workshop on Machine Learning Algorithms, Systems and Applications

Organized as part of the 15<sup>th</sup> IEEE International Conference on Machine Learning and Application  
(ICMLA-2016)

Los Angeles USA

December 18-20, 2016

For more information and paper submission visit:

<http://www.icmla-conference.org/icmla16/>

Many computer applications result in large volumes of data that require a set of techniques and tools to extract useful information for decision support, prediction, exploration and understanding of the phenomena governing the data sources. This workshop aims to bring together professionals, researchers, and practitioners to discuss efficient techniques, methods and tools to manage, exploit and interpret the increasing volumes of data in environments that may change continuously. The goal is to build models that are able to tackle and govern the high variability in stationary or non-stationary or complex hybrid systems. Such systems are being explored in various applications such as: medical diagnostics, robotics, business, industrial control, fault detection, quality control, surface inspection, system identification, transportation, communications, web applications, environmental monitoring, biomedical systems, decision support systems, security, and electronic services.

This workshop invites submissions with newly development from those working in areas of machine learning algorithms, systems and applications. Topics covered by this workshop include but are not limited to:

- Standard and multi-label classification,
- Unsupervised learning, clustering, pattern recognition
- Regression and approximation models from data
- Data mining and machine learning techniques,
- Ensemble methods (bagging, boosting, model fusion techniques,...)
- Dimension reduction and variable selection methods
- Incremental learning methods,
- Adaptive, life-long and sequential learning,
- On-line classification and regression methods,
- Evolving structural components and systems modelling
- Concepts to address drifts and shifts in data streams (weighting, gradual forgetting etc.)
- On-line/Incremental Active and Semi-supervised learning concepts
- On-line Human-machine interaction and the incorporation of background knowledge
- Adaptive data pre-processing and knowledge discovery
- Real world applications such as:
  - On-Line modeling and system identification
  - Time-Series prediction and forecasting
  - On-line quality control systems and condition monitoring
  - Fault detection, isolation, identification and diagnosis,
  - Predictive maintenance and prognostics
  - Big Data,
  - Web applications,
  - Decision Support Systems,
  - (Bio)Medical Applications
  - Cloud Computing

- Robotics, intelligent transport and advanced manufacturing
- Advanced communications and multi-media applications
- Query systems and social networks
- And many more ....

We encourage researchers to submit full research papers (upto 8 pages) and short research papers (upto 6 pages) reporting work in progress. All accepted papers from the two types of submissions will be included in the proceedings to be published by IEEE Press.

Authors should submit papers through the Machine Learning Algorithms, Systems and Applications Workshop Track of the conference submission website. Papers must correspond to the requirements detailed in the instructions to authors. All conference submissions will be handled electronically. Detailed instructions for submitting the papers are provided on the conference home page at:

<http://www.icmla-conference.org/icmla16/>

Accepted papers must be presented by one of the authors at the conference. Do not hesitate to direct any question that you may have to the workshop organizers.

### **Important Dates:**

Paper Submission Deadline:	August 6 <sup>th</sup> , 2016
Notification of acceptance:	September 7 <sup>th</sup> , 2016
Camera-ready papers & Pre-registration:	October 1 <sup>st</sup> , 2016
The ICMLA Conference:	December 18-20 2016

### **Workshop Chairs:**

Prof. Moamar Sayed-Mouchaweh  
 High National Engineering School of Mines “Ecole Nationale Supérieure des Mines de Douai”  
 Computer Science and Automatic Control Labs  
 France  
 E-Mail : [moamar.sayed-mouchaweh@mines-douai.fr](mailto:moamar.sayed-mouchaweh@mines-douai.fr)

Dr. Edwin Lughofer  
 Johannes Kepler University Linz,  
 Department of Knowledge-Based Mathematical Systems,  
 Austria  
[edwin.lughofer@jku.at](mailto:edwin.lughofer@jku.at)

Prof. Arif Wani  
 California State University Bakersfield, USA  
[awani@csub.edu](mailto:awani@csub.edu)

### **Program committee members (TBD)**