

**2018 IEEE World Congress on Computational Intelligence (WCCI)**  
8-13 July 2018, Rio de Janeiro, Brazil

**4nd International Workshop**

**Advances in Learning from/with Multiple Learners (ALML)**

**Overview**

This workshop will cover original and pioneering contributions, theory as well as applications on creating and combining learning models, and aim at an inspiring discussion on the recent progress and the future developments. Learners based on different paradigms can be combined for improved accuracy. Each learning method presupposes some model of the world that comes with a set of assumptions, which may lead to error if they do not hold. Learning is an ill-posed problem and with finite data each algorithm converges to a different solution and fails under various circumstances. In learning models combinations, it is possible to make a distinction between two main modes: ensemble and modular. For an ensemble approach, several solutions to the same task, or task component, are combined to yield a more reliable estimate. In the modular approach, particular aspects of a task are dealt with by specialist components before being recombined to form a global solution. In this workshop, the reasons for combining learning models and the main methods for creating and combining them will be presented. Also, the effectiveness of these methods will be discussed considering the concepts of diversity and selection of these approaches.

The workshop will strive to bring together the practitioners of these approaches in an attempt to study a unified framework under which these interactions can be studied, understood, and formalized.

**Relevant topics**

The following is a partial list of relevant topics (not limited to) for the workshop:

* Bagging approaches
* Boosting techniques
* Collaborative clustering
* Collaborative learning
* Cooperative learning
* Ensemble methods
* Hybrid systems
* Mixtures of distributions
* Mixtures of experts
* Modular approaches
* Multi-task learning
* Multi-view learning
* Task decomposition
* Transfer learning with multiple sources
* …

**Motivation:**

After successful organized workshops at WCCI 2014, IJCNN 2015, and IJCNN 2017 we continue the Series of the ALML workshop. The topics of the workshops are related but also complementary to WCCI topics, as the Multiple Learning models i.e. Collaborative Learning, or Learning from different Sources of data are new research directions in Machine Learning.

**Submission guidelines and special issue**

Prospective authors are invited to submit papers according to the IEEE format. All submissions should follow the specifications of WCCI 2018.

Authors of the most insightful papers already accepted for publication, will be invited to submit an extended version of their work to a Special Issue of the [**Neurocomputing**](http://www.journals.elsevier.com/neurocomputing/) journal (IF: 1.634).

**Organizers**

* Basarab Matei, Paris 13 University
* Guénael Cabanes, Paris 13 University
* Nistor Grozavu, Paris 13 University

Program Committee members

* Rushed Kanawati, Paris 13 University
* Rosanna Verde, Università della Campania "Luigi Vanvitelli”, Italy
* Abdelouahid Lyhyaoui, ENSA Tanger, Kingdom of Morroco
* Younès Bennani, Paris 13 University
* Jaouad Bennouna, USMBA Fès, Kingdom of Morroco
* Nicoleta Rogovschi, Paris Descartes University
* Issam Falih, Paris 13 University
* Jérémie Sublime, High Electronic School of Paris (ISEP)

Important Dates

* Submission deadline: January 15, 2018
* Notification of acceptance: March 15, 2018
* Camera-ready deadline: May 1, 2018
* Workshop date:

Short bio of the organizers

Matei Basarab

<http://lipn.univ-paris13.fr/~matei/>

Guénael Cabanes

<http://www-lipn.univ-paris13.fr/~cabanes/>

**Nistor GROZAVU** received his Master of Computer Science degree from Marseille II University in 2006 in Fundamental Informatics. He completed his Ph.D. in Computer Science (Unsupervised Learning) in 2009 in the Computer Science Laboratory of Paris 13 University. He is currently an Associate Professor in Computer Science at the Paris 13 University. His research is with the Machine Learning and Application Team from the LIPN Laboratory. His research interests include Unsupervised Learning, Transfer Learning, Dimensionality reduction, Collaborative Learning, Machine Learning by Matrix Factorization and content based information retrieval. He is also a member of IEEE, INNS, INNS AML group.

<http://www-lipn.univ-paris13.fr/~grozavu/>

Potential/Confirmed speakers for Half Day workshop:

Jérémie Sublime, ISEP

Kaoutar Benlmine, LIPN, Paris 13 University

Parisa Rastin, Mindlytics

Issam Falih, Paris 13 University

Hatim Chahdi, Monpellier University