

## Call for Papers

### “Learning and Assessment Analytics in STEM Education” (LAA-STEM’15) Special Session

Organized in conjunction with

#### 18th International Conference on Interactive Collaborative Learning

20-24 September 2015, Palazzo dei Congressi, Florence, Italy

<http://www.icl-conference.org/icl2015/index.php>

Education in Science Technology Engineering and Mathematics (STEM) is becoming an increasingly important part of basic literacy in today’s knowledge economy. The reason is that STEM creates critical thinkers, increases science literacy, and enables the next generation of innovators. However, there is a diminished interest of young people to STEM disciplines along with the growing demand of STEM professionals.

Towards aligning the essential innovation in STEM education with today’s compulsory digital literacy, ICT-enhanced learning could facilitate the transition to an equilibrium point where economies and students’ needs intersect. In specific, Learning Analytics (LA) and Educational Data Mining (EDM) could act as a facilitator that provides new opportunities for tracking and analysing learners’ behavioural data and interpreting them in an educationally meaningful way.

The goal of the 2015 Learning and Assessment Analytics in STEM Education (LAA-STEM’15) Special Session - within the 18<sup>th</sup> International Conference on Interactive Collaborative Learning (ICL2015) - is to bring together internationally leading academic and industrial researchers in an effort to promote the discussion on the major educational, pedagogical, conceptual and technical challenges and recent results aimed at addressing all aspects of Learning and Assessment Analytics in STEM education. The objective is to uncover and discuss emerging trends and technologies, sound research and successful services, as well as to identify and share best practices, within an international and interdisciplinary community. It will provide the opportunity for researchers and practitioners to present their latest work on exploring more complex and more information rich data sources, identifying new suitable measures of learning and success, focusing on theoretical concepts for understanding learning, and proposing sophisticated learning environments and applications to appropriately support STEM-learners and instructors.

To ensure complete coverage of the advances in this field, the LAA-STEM’15 workshop solicits original contributions in, but not limited to, the following topic areas:

- Analytic methods and tools for behavior modeling in STEM education,
- Measures of motivation, participation, dropout and satisfaction in STEM education,
- Measures of affect, attention, and expectations in STEM education,
- Measures of attendance and retention (as predictors of learning), attitudes, degree of competence and educational assessment and performance in STEM education,
- Detecting and addressing STEM-learners' affective and emotional states,
- Analytics for Serious and Adaptive Games and Gamification for enhancing STEM education,
- Emerging STEM-oriented learning and pedagogical environments enhanced with analytics: mobile platforms, wearable computing and immersive learning environments, intelligent tutoring systems, shared workspaces, social networking media, multi-modal learning environments, MOOCs, etc.,
- Analytic approaches for collaborative learning and assessment in STEM education,

- Methods and approaches for automated reasoning and recommendation strategies for personalization of learning environments to STEM-learners characteristics,
- Learning activities, applications, and interventions in STEM education,
- Best practices for adaptation of analytic techniques to information retrieval, opinion mining and auto scoring in STEM education,
- Privacy and ethics for Learning and Assessment Analytics in STEM education.

#### LAA-STEM'15 Special Session Chairs

Anastasios A. Economides, University of Macedonia, Greece, Email: [economid@uom.gr](mailto:economid@uom.gr)  
 Zacharoula Papamitsiou, University of Macedonia, Greece, Email: [papamits@uom.edu.gr](mailto:papamits@uom.edu.gr)

#### LAA-STEM'15 Program Committee (to be completed)

Santi Caballé, Open University of Catalonia (UOC), Spain  
 Mohamed Amine Chatti, RWTH Aachen University, Germany  
 Yannis Dimitriadis, University of Valladolid, Spain  
 Erik Duval, KULeuven, Belgium  
 Martin Ebner, Graz University of Technology, Austria  
 Davinia Hernández-Leo, Universitat Pompeu Fabra, Spain  
 Jelena Jovanovic, University of Belgrade, Serbia  
 Rob Koper, Open University of the Netherlands  
 Riccardo Mazza, University of Lugano, Switzerland  
 Xavier Ochoa, Escuela Superior Politécnica del Litoral (ESPOL), Ecuador  
 Carmen Padron, ATOS, Spain  
 Abelardo Pardo, University of Sydney, Australia  
 Thrasylvoulos Tsiatsos, Aristotle University of Thessaloniki, Greece  
 Martin Wolpers, Fraunhofer Institute for Applied Information Technology, Germany

#### Submission:

Articles submitted to LAA-STEM'15 will follow the Conference Submission System: (<https://www.conftool.com/icl-conference/>). Before preparing your paper, please read carefully the **instructions for authors**, then submit it to the **Conference Submission System**. Presented papers will be published in the ICL2015 Proceedings and submitted to IEEE Explore (more details at <http://icl-conference.org/icl2015/proceedings.php>).

The Special Session LAA-STEM'15 Organizers will look for possibilities of later submissions of reworked papers in International Journals.

#### Important Dates:

01 Jun 2015	Submission deadline for full and short papers, work in progress, special sessions' papers
23 Jun 2015	Notification of Acceptance
15 Jul 2015	Author registration deadline & Final/Camera-ready Due
20 Sep 2015	Conference Opening

#### Contacts:

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