



CALL FOR PAPERS

SPECIAL ISSUE ON

Decision making in Engineering Education using Learning Analytics

Guest Editors

Miguel Ángel Conde González

Escuelas de Ingenierías Industrial e Informática
Universidad de León, Spain

Ángel Hernández García

Escuela Técnica Superior de Ingenieros de Telecomunicación
Universidad Politécnica de Madrid, Spain

The use of Information and Communication Technologies (ICTs) to support learning processes is commonplace these days. ICT systems may act as a mere support to traditional classroom teaching, but they also can facilitate educational content publishing and sharing, completion of online activities, exchanges of opinions and experiences, etc. ICT-supported learning has been especially successful and relevant in Engineering Education because students are more familiar with the use of technology, and ICTs enable the development of specific educational activities that are hardly affordable or feasible in traditional contexts. The use of ICT in educational contexts leaves a trail of student activity and interactions that may be associated with learning evidences. IT-based systems store large amounts of data whose analysis might greatly help making decisions for improvement of Engineering Education teaching and learning.

Learning analytics tools and methods focus on this kind of analysis. Long and Siemens define learning analytics as *“the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimising learning and the environments in which it occurs”* (er.educause.edu/articles/2011/9/penetrating-the-fog-analytics-in-learning-and-education). Learning analytics facilitates discovery of “hidden” knowledge about teaching and learning processes, including engineering education. Therefore, the use of learning analytics allows teachers and students to obtain information about student progress, at-risk students, suitability of course contents and design, student, teacher and group interactions, etc. Institutions and instructors may then use that information to plan interventions and changes oriented toward

helping students, redesign courses, adapt learning contents and methods, use specific tools, etc.

The application of learning analytics is a powerful tool that helps students to improve their learning, institutions to improve their educational processes, and instructors to improve their teaching. This special issue welcomes submissions of original research on such learning analytics methods, tools and experiences, with emphasis on the impact of application of learning analytics on decision making, in the specific context of Engineering Education.

Topics of interest include

- Success stories and case studies in Engineering Education
- Methods, tools and applications for decision making in Engineering Education
- Competence-based learning analytics: learning analytics for assessment of generic and specific competences
- Educational data visualization in Engineering Education
- Data sources for learning analytics in Engineering Education
- Differences between the application of learning analytics in Engineering Education and other educational settings.
- Future directions and new paths for learning analytics in Engineering Education

Submissions are to be sent by e-mail in MSWord (.doc) to the guest-editors of the Special Issue:

- **Dr. Miguel Ángel Conde González:** miguel.conde@unileon.es
- **Dr. Ángel Hernández García:** angel.hernandez@upm.es

Important dates

- Submission of extended abstracts (around two pages): January 31, 2017
- Notification of reviewers' feedback: February 28, 2017
- Complete manuscript submission: May 1, 2017
- Notification of reviewers' feedback: July 15, 2017
- Final manuscript submission: September 1, 2017

Manuscripts must be written in English and limited to 12 one-sided, one-column, single-spaced pages. Manuscripts should include keywords, complete affiliation of the authors and a short biography. Citations and reference list should comply with IJEE style guidelines. Figures and illustrations should be suitable for non-color printing.

General information and guidelines are available at the IJEE web site: <http://www.ijee.ie>
Specific Information for authors is available at:
http://www.ijee.ie/authors/Guide_to_Authors.html and <http://www.ijee.ie/pagechrg.html>,
http://www.ijee.ie/Page%20Charge_2015.html