Editorial: A Message from the Editorial Team and an Introduction to the January-March 2017 Issue

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WELCOME to the 10th year of publication and the first 2017 issue of the *IEEE Transactions on Learning Technologies* (*TLT*). Ten years could be considered as a threshold that marks the transition from a newcomer to an established journal in the field. *IEEE TLT* is passing this threshold as a recognized journal, ranked among the top ten journals in the field of Educational Technology by Google Scholar. Its 5-years citation index reported by Thomson Reuters in the annual Journal Citation Report rose from 0.927 in 2011 to 1.608 in 2015.

The flow of high-quality submissions to the journal is increasing every year and the acceptance rate remains relatively low (18 percent in 2015). While each of these factors is positive, taken together they gradually lead to a situation when all high-quality papers accepted in one a year cannot be published within the annual 400-page allocation. As a result, the number of papers not yet assigned to a specific issue has also been growing. While accepted *IEEE TLT* papers now appear online on the journal site almost immediately, the growth of the portfolio of not-yet-assigned papers has been a concern of the Editorial team for the last two years. We are happy to announce that, starting from 2017, the annual page allocation has been increased to 450 pages. We hope that this will help us reduce the delay between acceptance of a paper and its formal publication as a part of a specific issue.

With that, we are happy to introduce the first issue of 2017. The main feature of this issue is the special section on Learning Analytics. This special section is guest edited by Dragan Gašević, George Siemens, and Carolyn Penstein Rosé who are recognized experts in this emerging field. The guest editors have provided an extensive introduction where they briefly review the field of learning analytics and the papers published in the special section.

In addition, this issue features three regular papers. As it happens, two of these papers are also related to the field of learning analytics and in some sense could be considered as an informal extension of the special section. With the help of the guest editors, we have attempted to place these papers into the context of the special section. To make the most of the following summaries, we recommend that you read the introduction to the special section first.

The paper "Combining University Student Self-Regulated Learning Indicators and Engagement with Online Learning Events to Predict Academic Performance" by Abelardo Pardo, Feifei Han, and Robert A. Ellis fits well into the first group of papers included into the special section—learning analytics to predict academic performance. Pardo and his colleagues ground their study in the theory of self-regulated learning to explain learning processes of undergraduate students in a blended learning course. The authors demonstrate that the variation of the students' final scores for their course could be better explained using a combination of log data from students' interaction with online resources and their self-regulated learning parameters (motivational, affective, and cognitive aspects) collected using a self-reported questionnaire. The results point to the potential of adopting a combined use of self-report and observed data to better understand and predict learning success.

The paper "Contextual Markup and Mining in Digital Games for Science Learning: Connecting Player Behaviors to Learning Goals" by John S. Kinnebrew, Stephen S. Killingsworth, Douglas B. Clark, Gautam Biswas, Pratim Sengupta, James Minstrell, Mario Martinez-Garza, and Kara Krinks is a good addition to the special section and expands its scope with a strong data science perspective. Kinnebrew and his colleagues look at the use of a metadata markup language for context capture in digital games. The markup language relates game actions to concepts relevant to specific game contexts, helping to interpret students' actions. These data are used as input for a sequence-mining algorithm to identify strategies followed by learners. The paper reports on possible connections between planning/prediction behaviors of middle school students identified by the sequence-mining algorithm and scores on formal assessments. The paper is significant as it proposes a method that can offer insights into temporal dimensions of learning, suggested by the guest editors to be one critical direction for future development in the field of learning analytics.

The third regular paper for this issue is in the area of personalized mobile learning. "Constructing a User-Friendly and Smart Ubiquitous Personalized Learning Environment by Using a Context-Aware Mechanism" by Ching-Bang Yao describes a context-aware system to teach basic English. It comprises three subsystems, to analyze learner behavior and preferences, identify current location from GPS and QR inputs, and deliver learning content appropriate to the learner's ability, interest, location, and previous activity. The system was tested with 102 first-year undergraduates over three months. Comparison with a control group who used mobile devices to search for English language materials showed higher mean post-test scores for the experimental group, with the greatest average gain for those students in the lowest ability range.

Enjoy your reading!

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