

Preface

We are pleased to welcome you to the 12th European Conference on Technology-Enhanced Learning (EC-TEL 2017). This year's conference is held in the beautiful city of Tallinn, Estonia, September 12–15, 2017.

The EC-TEL 2017 conference is supported by the European Association of Technology Enhanced Learning (EATEL), and this year is hosted by the University of Tallinn, a university with a young but very successful research program on Technology-Enhanced Learning and Learning Analytics.

Building on the momentum generated by previous EC-TEL conferences, this year's conference once again provides a multidisciplinary forum for different disciplines to discuss critical issues and challenges confronting the education sector of the future. Digitalization and data-driven research will probably be of major importance in upcoming years. It is rapidly growing in all facets and significantly changing how we conduct research in Technology-Enhanced Learning (TEL). Moreover, data-driven research is affecting our underlying theoretical constructs as well as government policies. The increasing amount of data that can be collected from learning environments, but also various wearable devices and new hardware sensors, offers plenty of opportunities to rethink educational practices and provides new innovative approaches to learning and teaching. This kind of data helps to investigate new insights about learning, inform on individual and group-based learning processes and contributes to a new kind of data-driven education for the 21st century.

For EC-TEL 2017, the Program Committee has selected contributions that explore how data can be used to change and enhance learning in different ways, and to highlight evidence for technological innovations in learning such as multimodal data, personal data stores, data visualizations for learner and teacher awareness, feedback processes, predictions of learning progress, personalization and adaptation, as well as data-driven learning designs, or ethics and privacy policies for the data-driven future.

The 12th EC-TEL conference on Data Driven Approaches in Digital Education aims to explore the multidisciplinary approaches that effectively illustrate what data-driven education combined with digital education systems can look like and what empirical evidence there is for the use of data-driven tools in educational practices. This theme is reflected in the workshops, papers, posters, panels, and especially our keynote talks. Stéphanie Teasley, from the University of Michigan, will give a presentation on “Creating the Institutional Capacity to Leverage Learning Analytics in Higher Education” and Gerhard Fischer, from the University of Colorado, will present on “Envisioning and Grounding New Educational Designs in Data Driven Approaches”. Marco Marsella, from the European Commission, will detail the results of EU Actions, challenges and the future outlook of digital learning. The conference will culminate with a leadership panel featuring leaders from a spectrum of research societies dedicated to advancing education under the shadows of the data-driven society of the near future.

Continuing the trend from previous EC-TEL conferences, this year we worked to maintain the breadth and quality of the Program Committee and sought to include representation from related fields, bringing in prominent academics that are involved in data-driven education. We had a very high number of submissions that resulted in considerable competition among excellent research papers. A total of 141 valid paper submissions were received. We aimed to provide a high standard in our review process, providing at least three reviews for each full paper. All reviews were checked and discussed by the general chair, the PC and the poster and demonstration chairs. Out of the 95 full papers received, it has been quite a challenge to select 24 full papers for presentation, resulting in a 25.3% acceptance rate. Additionally, 26 papers were chosen as short papers, 6 as demonstrations, and 22 as posters. We also provided a pre-conference program consisting of a doctoral consortium including 19 students. Additionally, we accepted 7 workshops.

While we celebrate the vast interdisciplinary work within the EC-TEL community, and the continuous popularity of this conference in Europe and beyond, we are proud to be a community with diverse backgrounds and often intersecting research and theoretical approaches. Although this is already the 12th EC-TEL conference, interdisciplinary content is still a challenge and a source of innovation as well. We still need to work together to achieve a shared vision for the TEL field. We have also noticed that EC-TEL is facing a first generation change, where younger researchers take over what the experienced scholars have built up in the last 12 years. This is an important milestone for the EATEL society and the EC-TEL community in further maturing our research.

Our hope is that you will greatly benefit from your participation in EC-TEL 2017, and that it will both strengthen and deepen your network within the community. We explicitly want to stimulate young researchers to become pro-active members of the EATEL and the EC-TEL communities and to further shape the European research community on TEL, which is committed to high-quality research and international exchanges. We believe this community is urgently needed as a European fireplace to share knowledge, and to guide educational innovation and the use of technology and data for the European education systems of the future. The program has prepared a foundation for this vision, but the real value in the event will emerge through the interplay between the people behind the research and the interactions that will occur within the community.

We would like to thank all the authors who contributed to maintaining the high-quality level of the conference, as well as the PC members and reviewers who shared their expertise by giving constructive feedback to authors. We would also like to thank the local organization team for their great work and their warm welcome!

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