Preface

New trends in technologies, such as data analytics, cloud computing, maker spaces, 3-D printing, wearable technologies, augmented reality and intelligent systems are just a few examples of technologies investigated for their potential to transform teaching, learning and assessment both in formal education (at all levels) and informal learning.

The International Conference on Advanced Learning Technologies (ICALT) is an annual conference organized by IEEE Computer Society and IEEE Technical Committee on Learning Technology. It aims to bring together researchers, practitioners, industrial experts and policy makers, who are working on the design, development, deployment and evaluation of technologies that will be the foundation of the next generation of technology-enhanced learning environments. After its kick-off as IWALT in Palmerston North, New Zealand (2000), ICALT has been held in Madison, USA (2001), Kazan, Russia (2002), Athens, Greece (2003), Joensuu, Finland (2004), Kaohsiung, Taiwan (2005), Kerkade, The Netherlands (2006), Niigata, Japan (2007), Santander, Spain (2008), Riga, Latvia (2009), Sousse, Tunisia (2010), Athens, Georgia, USA (2011), Rome, Italy (2012), Beijing, China (2013), Athens, Greece (2014), Hualien, Taiwan (2015).

The 16th IEEE International Conference on Advanced Learning Technologies (ICALT 2016) is held in Austin, Texas, USA. This year, the ICALT conference was structured around 18 tracks on various thematic topics, including: Digital Systems for Open Access to Education and Learning; Adaptive and Personalised Technology-Enhanced Learning; Wireless, Mobile and Ubiquitous Technologies for Learning; Digital Game and Intelligent Toy Enhanced Learning; Computer Supported Collaborative Learning; Technology-enhanced Assessment in Formal and Informal Education; Big Data in Education and Learning Analytics; Technology-Enhanced Science, Technology, Engineering and Math Education; Technology Enhanced Language Learning; Motivational and Affective Aspects in Technology-enhanced Learning; Technology Enabled Learning of Thinking Skills; Recommender and Decision Support Systems for Learning; Technology Supported Education for People with Disabilities, Smart Learning Environments; Maker Spaces and 3-D Printing Based Innovations; Wearable Technologies in Education; Virtual Worlds in Education and Training and a Doctoral Consortium.

ICALT2016 received 259 papers with 692 researchers from 45 countries. All submissions were peer-reviewed in a double-blind review process by an international panel of at least three international expert referees and decisions were taken based on assessing research quality. A total of 410 researchers were involved in the review process at various roles. We acknowledge the invaluable assistance of the track chairs, the track program committee members and the additional reviewers, who are named on the next pages. For another year, the quality of the submissions was very high. A total of 72 papers were accepted as full papers in the ICALT conference; that is a 26.37% acceptance rate. Furthermore, 39 papers were selected for presentation as short papers, 29 as posters and 6 papers were selected for the Doctoral Consortium. With all the effort that has gone into the process, by authors, reviewers and track chairs, we are confident that this year’s ICALT proceedings will immediately earn a place as an indispensable overview of the state of the art and will have significant archival value in the longer term.

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