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# Learning Technologies and Systems

19th International Conference on Web-Based Learning, ICWL 2020 and 5th International Symposium on Emerging Technologies for Education, SETE 2020 Ningbo, China, October 22–24, 2020 Proceedings



Editors Chaoyi Pang

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#### **Preface**

This volume presents the contributions of the 19th edition of the annual International Conference on Web-based Learning (ICWL). The first edition of ICWL was held in Hong Kong in 2002. Since then, it has been held 16 more times, on three continents: Australia (2003); Beijing, China (2004); Jinhua, China (2008); Shanghai, China (2010); Hong Kong, China (2005, 2011, 2015); Malaysia (2006); UK (2007); Germany (2009); Romania (2012); Taiwan, China (2013); Estonia (2014); Italy (2016); South Africa (2017); Thailand (2018); and Germany (2019); This year, ICWL 2020 was held in Ningbo, China, organized by Ningbo University of Technology, China.

Furthermore, the conference continued the traditional initiative, started by ICWL 2016, of holding the 5th International Symposium on Emerging Technologies for Education (SETE) at the same location. SETE collected the traditional workshop activities managed by ICWL in the past years and additionally was organized in tracks. Workshops and tracks added new and hot topics on technology-enhanced learning, providing a better overall conference experience to the ICWL and SETE attendees.

The topics proposed in the ICWL&SETE Call for Papers included several relevant issues, ranging from Semantic Web for E-Learning, through Learning Analytics, Computer-Supported Collaborative Learning, Assessment, Pedagogical Issues, E-learning Platforms, and Tools, to Mobile Learning. Due to the impact of the COVID-19 pandemic, we decided to combine papers from ICWL 2020 and SETE 2020 into one proceedings volume this year.

We received 16 submitted contributions for ICWL 2020, and received 56 submitted contributions for SETE 2020. All of the submitted papers were assigned to three members of the Program Committee (PC) for peer review. All reviews were checked and discussed by the PC chairs, and additional reviews or meta-reviews were elicited if necessary. Finally, we accepted seven full papers for ICWL 2020 with an acceptance rate of 43.75%, and accepted 23 full papers for SETE 2020 with an acceptance rate of 41%.

In addition to regular papers, SETE 2020 also featured a special workshop on Educational Technology for Language Learning (ETLL-20). ETLL-20 is a forum for presenting and discussing novel ideas and solutions related to educational technology for language and translation learning from the perspectives of both theory and application. We received 21 submitted contributions, and finally accepted 15, where each submitted paper was assigned to two reviewers. As the General Chair of ETLL-20, Prof. Shili Ge would like to thank all the authors for their enthusiastic high-quality submissions, the reviewers (PC members) for their careful and timely reviews, and the organizing committee for their excellent publicity.

We would like to sincerely thank our keynote and invited speakers:

 Prof. Chin-Chung Tsai, a Chair Professor and Dean of the School of Learning Informatics and the Director of the Institute for Research Excellence in Learning Sciences at National Taiwan Normal University, Taiwan, China;

- Prof. Dragan Gašević, Director of the Centre for Learning Analytics at Monash University, a founder and former President (2015–2017) of the Society for Learning Analytics Research, Austria;
- Prof. Kaizhu Huang, an Associate Dean of research in the School of Advanced Technology at Xi'an Jiaotong-Liverpool University, the founding director of Suzhou Municipal Key Laboratory of Cognitive Computation and Applied Technology, China.

Many contributions made the conference possible and successful. First of all, we would like to thank all the authors who considered ICWL&SETE for their submission. We thank the PC members, and the additional reviewers, for their evaluations, which made the selection of the accepted papers possible. Additional thanks go to the publicity co-chairs An Liu from Soochow University, Michael A. Herzog from Magdeburg-Stendal University of Applied Sciences, Jianmin Zhao from Zhejiang Normal University, and Mart Laanpere from Tallinn University.

For the organization, the hosting Smart IoT Engineering and Application Lab under the direction of Prof. Genlang Chen served in multiple functions: local organization chair Shiting Wen, also as web chair. Their strong and continuous commitment made it a remarkable conference event with excellent design, smooth orientation, personal service, and warm hospitality. We also thank the sponsor Springer, for the enlightened and much appreciated support that helped to dedicate the Best Paper Awards.

We expect that the ideas that have emerged in ICWL&SETE 2020 will result in the development of further innovations for the benefit of scientific, industrial, and social communities. We hope that the reader of this volume will be pleased by the relevance of the topics and contents of the papers, and thus be enticed to contribute to the next editions of ICWL&SETE.

November 2020

Chaoyi Pang Yunjun Gao Guanliang Chen Elvira Popescu Lu Chen Tianyong Hao Bailing Zhang Silvia Margarita Baldiris Navarro Qing Li Ralf Klamma

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