ICIME 2018 Foreword

The International Joint Conference on Information, Media, and Engineering (ICIME2018) is a forum for diverse scholars to share and explore new ideas together in fresh ways. Here we reflect the exploration, practice, research, and adoption of digital media, as well as various uses of information and communication platforms within innovative engineering applications. Presenting both applied and classical research, these papers highlight new and emerging technologies, investigate model applications, and propose integrating new technologies in cultural contexts. Here, research on accessibility via media applications with a diversity focus blends with new analytical methods that interpret meanings out of existing data.

The theme of applied research on emerging technologies and media reveals many new possibilities for media and technologies in communication, learning, and engineering today. Topics at ICIME2018 range from virtual reality for collaborative learning to the exploration of pulse waves as psychological indicators in the analysis of learning pressure and from 3D electronic board games for elementary-school students’ learning to augmented reality in education. These papers help us set a contemporary baseline for future investigations and applications of novel information, media, and engineering ideas. New technologies and media can and must also reflect the cultural context where the integration has taken place. For example, many papers here study the use of WeChat and Weibo applications for teaching and learning, while others demonstrate the utility of different applications in the context of mobile devices while carefully examining both how these applications inform social welfare and shape media use patterns. For example, in A Method for Ink-wash Paint Rendering for 3D Scenes, Wang, Shen, and Ding (2018) use algorithms to modify the 3D scenes with Chinese traditional ink-wash techniques, rendering beautiful Chinese paintings in 3D with strong cultural messages.

These papers have also researched classical models of technology integration along with new media focusing on accessibility and diversity. Some authors studied models like the Technology Acceptance Model (TAM) in different contexts with new technology adoptions. Others suggest that newer models like the Conceiving, Designing, Implementing, Operating (CDIO) framework can better conceptualize new engineering systems and product designs. Importantly as well, researchers here inquire deeply about the gender perspectives in interpreting technologies and about aiding individuals who have special needs. Equally exciting are new research and data analysis methods used in analyzing and interpreting the newspaper data content in the past four decades as authors trace back the public attention to pollution (Xu, Hu, & Miyoshi, 2018). Video analysis and visualization of data analysis also emerge because these types of data are more and more affordable and accessible.

We recognize a very high potential impact of these important papers. We believe that they are valuable contributions in the transition, adoption, and integration of media and technologies for engineering contexts in the future.

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