

**Intelligent Interactive Multimedia:  
Systems and Services (KES-IIMSS-18)  
Introduction**

# **Intelligent Interactive Multimedia: Systems and Services (KES-IIMSS-18) Introduction**

We introduce to you a series of carefully selected papers presented during the 11th KES International Conference on Intelligent Interactive Multimedia Systems and Services (IIMSS-18).

At a time when computers are more widespread than ever, and computer users range from highly qualified scientists to non-computer expert professionals, Intelligent Interactive Systems are becoming a necessity in modern computer systems. The solution of “one-fits-all” is no longer applicable to wide ranges of users of various backgrounds and needs. Therefore, one important goal of many intelligent interactive systems is dynamic personalization and adaptivity to users. Multimedia Systems refer to the coordinated storage, processing, transmission and retrieval of multiple forms of information, such as audio, image, video, animation, graphics, and text. The growth rate of multimedia services has become explosive, as technological progress matches consumer needs for content.

The conference took place as part of the Smart Digital Futures 2018 multi-theme conference, which groups AMSTA, IDT, InMed, SEEL, STS with IIMSS in one venue. It was a forum for researchers and scientists to share work and experiences on intelligent interactive systems and multimedia systems and services. It included a general track and four invited sessions.

The invited session “Cognitive Systems and Big Data Analytics” (Chaps. 1–3) specifically focuses on Big Data security, word representations in a machine-readable way, and interactive virtual environments. The invited session “Data Processing and Secure Systems” (Chaps. 4–6) focuses on models, techniques, and algorithms capable of analysing, mining and processing both critical and social data. Differently, the invited session “Innovative Information Services for Advanced Knowledge Activity” (Chaps. 7–13) discusses models, techniques and algorithms for the detection and recognition of human activities, as well as sensing architectures for control systems. The invited session “Autonomous System” (Chaps. 14–16) considers theoretical and practical issues in the design of intelligent and autonomous systems. Finally, the general track (Chapter 17) focuses on image processing, specifically on novel approaches to saliency detection.

Our gratitude goes to many people who have greatly contributed to putting together a fine scientific program and exciting social events for IIMSS 2018. We acknowledge the commitment and hard work of the program chairs and the invited session organizers. They have kept the scientific program in focus and made the discussions interesting and valuable. We recognize the excellent job done by the program committee members and the extra reviewers. They evaluated all the papers on a very tight schedule. We are grateful for their dedication and contributions. We could not have done it without them. More importantly, we thank the authors for submitting and trusting their work to the IIMSS conference.

We hope that readers will find in this book an interesting source of knowledge in fundamental and applied facets of intelligent interactive multimedia and, maybe, even some motivation for further research.

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