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Systems, Signals and Image Processing

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Revised Selected Papers

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Preface

Signal processing is a phenomenon which is a principal tool for all applications based on computer technologies for an interaction with the real world. Data/signal retrieval, processing, and visualization comprise the general methodology in most scientific areas. From filter design, Fourier and other transforms, feature extraction, etc. through machine learning and system adaptation to user-oriented products like 5G networks, IoT, virtual teleportation, or tele-surgery operations, this is a very brief resume of the power of signal processing. Advanced signal processing is therefore a very complex topic with deeply structuralized content.

The International Conference for Systems, Signal and Image Processing (IWSSIP) is a well-established event with traditional participation of people from all continents. In 2021, the 28th IWSSIP conference was organized by the Slovak University of Technology, Bratislava, Slovakia, following the previous successful IWSSIP 2020 event in Rio de Janeiro, Brazil, and past conferences in various countries.

We are proud of having outstanding invited speakers who significantly increased the scientific quality of this event. Touradj Ebrahimi from École Polytechnique Fédérale de Lausanne, Switzerland, presented the state of the art in image compression standards based on artificial intelligence. Gabriel Miro-Muntean from Dublin City University, Ireland, gave a deep introduction to "Delivering High Quality Rich Media Content in Current Network Environment: Challenges and Solutions". Abir Hussain from Liverpool John Moores University, UK spoke about the "Detection and Localization of Objects Within Images Using Computer Vision and Machine Learning". We are deeply thankful to all three speakers for their valuable time and invited lectures.

Due to special COVID-19 pandemic regulations the presentations of all three keynote speakers, as well as the whole conference, was organized in a strictly online format with the stress on full interaction among IWSSIP participants. The whole conference was powered by underline.io and we would like to express our gratitude for their professional help with organizing the online event.

Despite the fact that one of the main goals of scientific conferences is to gather researchers working in similar areas in one place, there was still huge interest in the online IWSSIP 2021 event. We received 76 paper proposals from authors in 17 countries. The best 20 papers were accepted and selected for this publication. These papers are closely related to advances in signal processing. The orientation of presented papers shows the huge diversity and complexity of advanced signal processing.

We would like to thank all participants of IWSSIP 2021, as well as everyone who helped to make this conference successful.

June 2021

Gregor Rozinaj
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