

## Foreword

IFAC and IEEE International Conference on Programmable Devices and Embedded Systems (PDeS) is organized every 18 months in cooperation of the Institute of Electronics of Silesian University of Technology in Gliwice (Poland), the Faculty of Electrical Engineering and Computer Science of the University of Ostrava (Czech Republic) and Electrical Engineering and Communication of the Brno University of Technology. The 2015 year event was hosted in Cracow by Institute of Electronics of Silesian University of Technology. This event was unique opportunity to celebrate 20 years of PDeS meetings since its beginning in 1995.

The conference field ranges from general industrial programmable controllers, field programmable logic and high end design means through microprocessor systems and single chip microcomputers to various aspects concerning digital signal processing, communication and automation problems to medical and cyber-physical systems. During the conference took place two special sessions devoted to Medical Cyber-Physical Systems and Modern Techniques of Design and Implementation of Highly Flexible Controllers.

After careful analysis and review, the International Program Committee of PDeS 2015 has selected 81 regular papers for presentation at the Conference sessions and later publication. Six outstanding papers has been select for publishing in the International Journal of Electronics and Telecommunication. Selected papers illustrate the conference hot topics covering problems of logic synthesis, digital system modeling, algorithms for signal and image processing, medical systems design and implementation. The authors of selected papers have prepared new extended versions containing their recent research results in these fields. I thank the authors for the effort and I hope that the papers will be interesting for the readers.

On behalf of the PDeS 2015 Program and Organizing Committees I would like to express special thanks to the conference sponsors: the International Federation of Automatic Control and its technical committees TC3.1 on Computers for Control and TC 4.1 on Components and Technologies for Control for scientific and technical support, the Poland Section of Institute of Electrical and Electronics Engineers (IEEE) for technical sponsorship, Polish Academy of Sciences and Cadence, Inc. for financial support of the event.

Edward Hryniewicz

Guest Editor