

# CENICS 2015

## Foreword

The Eighth International Conference on Advances in Circuits, Electronics and Micro-electronics (CENICS 2015), held between August 23-28, 2015 in Venice, Italy, continued a series of events initiated in 2008, capturing the advances on special circuits, electronics, and micro-electronics on both theory and practice, from fabrication to applications using these special circuits and systems. The topics cover fundamentals of design and implementation, techniques for deployment in various applications, and advances in signal processing.

Innovations in special circuits, electronics and micro-electronics are the key support for a large spectrum of applications. The conference is focusing on several complementary aspects and targets the advances in each on it: signal processing and electronics for high speed processing, micro- and nano-electronics, special electronics for implantable and wearable devices, sensor related electronics focusing on low energy consumption, and special applications domains of telemedicine and ehealth, bio-systems, navigation systems, automotive systems, home-oriented electronics, bio-systems, etc. These applications led to special design and implementation techniques, reconfigurable and self-reconfigurable devices, and require particular methodologies to be integrated on already existing Internet-based communications and applications. Special care is required for particular devices intended to work directly with human body (implantable, wearable, eHealth), or in a human-close environment (telemedicine, house-oriented, navigation, automotive). The mini-size required by such devices confronted the scientists with special signal processing requirements.

We take here the opportunity to warmly thank all the members of the CENICS 2015 Technical Program Committee, as well as the numerous reviewers. The creation of such a high quality conference program would not have been possible without their involvement. We also kindly thank all the authors who dedicated much of their time and efforts to contribute to CENICS 2015. We truly believe that, thanks to all these efforts, the final conference program consisted of top quality contributions.

Also, this event could not have been a reality without the support of many individuals, organizations, and sponsors. We are grateful to the members of the CENICS 2015 organizing committee for their help in handling the logistics and for their work to make this professional meeting a success.

We hope that CENICS 2015 was a successful international forum for the exchange of ideas and results between academia and industry and for the promotion of progress in the field of circuits, electronics and micro-electronics.

We hope Venice provided a pleasant environment during the conference and everyone saved some time for exploring this beautiful city.

### **CENICS 2015 Chairs:**

Vladimir Privman, Clarkson University - Potsdam, USA

Sergey Y. Yurish, Technical University of Catalonia (UPC-Barcelona), Spain

Martin Horauer, University of Applied Sciences Technikum Wien, Austria

Adrian Muscat, University of Malta, Malta

**CENICS 2015 Research/Industry Chairs**

Ravi M. Yadahalli, PES Institute of Technology & Management - Karnataka, India

**CENICS 2015 Industry Liaison Chairs**

Falk Salewski, Muenster University of Applied Sciences, Germany

**CENICS 2015 Publicity Chair**

Sandra Sendra Compte, Universidad Politécnica de Valencia, Spain

**CENICS 2015 Special Area Chairs**

**Formalisms**

Peeter Ellervee, Tallinn University of Technology, Estonia

**Application-oriented**

Josu Etxaniz Marañon, University of the Basque Country / Universidad del País Vasco / Euskal Herriko Unibertsitatea - Bilbao, Spain

**Sensors**

Yulong Zhao, Xi'an Jiaotong University, China