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Ryszard S. Romaniuk Krzysztof S. Kulpa Editors

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Introduction

Symposium **SPIE-IEEE-PSP WILGA** is a kind of international Forum of Young Science. It is annually organized under the eminent patronage of two big international engineering institutions SPIE [www.spie.org] and IEEE [www.ieee.org] and their Polish Counterparts: Photonics Society of Poland [www.photonics.pl], successor of Polish Chapter of SPIE [www.spie.pl] and IEEE Poland Section [www.ieee.pl]. The patrons of the symposium are: Polish Academy of Science (The Committee on Electronics and Telecommunication) [keit.pan.pl], Association of Polish Electrical Engineers (SEP) [www.sep.com.pl], Warsaw University of Technology [www.pw.edu.pl].

Official language of the Symposium is English. Peer reviewed papers are published in a renowned, world wide recognized series Proceedings of SPIE in USA. Symposium is designed mainly for for Ph.D., M.Sc., and B.Sc. students (from physics, electronics and mechatronics) and their tutors/mentors. WILGA has a number of main topical tracks. Historically, the first one was Photonics and Web Engineering. Generally, WILGA embraces advanced photonic and electronic systems, in the following aspects: theory, modeling, algorithms, simulations, design, hardware, software, hardware-software interaction, measurements, testing, commissioning and exploitation.

Topical sessions are organized by leading experts. Sessions usually begin with current tutorials and are filled with contributed papers by students and young researchers. One of the most important session tracks in WILGA are photonics applications and systems for superconductive accelerator (and free electron laser) technology and high energy physics experiments. We invite warmly students, young researchers and their tutors to participate in WILGA.

WILGA 2009 was held on 25-31 May in a resort owned by Warsaw University of Technology. There were delivered nearly 200 presentations covering a broad area of photonics applications and web engineering.

The Jachranka 2009 VI Signal Processing Symposium (SPS-2009) was held on 28-30 May 2009 at GUS Holiday Camp in Jachranka Village (near Warsaw). The main goal of the symposium is to create a forum for students and scientists to present their latest research results, new trends in science and technology and exchange ideas during technical and evening sessions.

The Jachranka meeting is a part of the 24th SPIE-IEEE Symposium on Advanced Photonics and Electronics Systems and Web Engineering. The SPS-2009 conference was organized by the Institute of Electronic Systems, Warsaw University of Technology

together with Przemyslowy Instytut Telekomunikacji S.A., Military University of Technology, RADWAR S.A, Space Research Center of Polish Academy of Sciences, Foundation for Development of Radiocommunication and Multimedia Technologies, IEEE Signal Processing Society Poland Chapter and IEEE AESS Poland Chapter.

In 2003, the 12th IEEE-SPIE Symposium on Advanced Photonics and Electronics was organized and for the first time dr K.Kulpa chaired the Digital Signal Processing and Radar Signal Processing Sessions. In 2005 and 2007 the students from The Radiolocation and Digital Signal Processing Students' Research Group and dr Kulpa decided to organize consecutive the second and the third edition of Signal Processing Symposium, which was a part IEEE-SPIE Symposium on Photonics, Electronics and Web Engineering. SPS-2005 and SPS 2007 gathered more than 100 participants. It has been assessed as very successful events. That fact has led the Radar Group of ISE to organize for the fourth time Signal Processing Symposium SPS-2009.

Ryszard S. Romaniuk Krzysztof S. Kulpa Institute of Electronic Systems Warsaw University of Technology (Poland)