

■ “Application of Oxides in Electronic Engineering and Transducer Devices.”

Social events included a welcome party, a sightseeing tour around the city of Lviv, and a workshop dinner.

OMEE 2009 continued a tradition that started regionally and expanded into international scientific workshops on complex oxide materials, all held in Western Ukraine. The previous OMEE Workshop took place in Lviv in 2007. LPNU was the main organizer in 2009, while co-organizers were the IEEE MTT/ED/AP/CPMT/SSC West Ukraine Chapter, the Scientific Research Company “Carat” (Lviv, Ukraine), Institute of Physics of the Polish Academy of Sciences (Warsaw, Poland), and Scientific Council on Laser Physics and Laser Technologies at NAS of Ukraine (Kyiv, Ukraine).



At the opening ceremony of OMEE 2009 (from left): Prof. H. Szymczak (Poland), Prof. Z.G. Pikh (Ukraine), Prof. Yu. M. Rashkevych (Ukraine), Prof. U. Bismayer (Germany), and Prof. S.B. Ubizskii (Ukraine).

Proceedings of the workshop will be published in a special issue of *Acta Physica Polonica A*. To obtain a copy of the OMEE 2009 Proceedings, please send an e-mail request

to Olga Zamorska, ome@polynet.lviv.ua.

—Dr. Yaroslav Zhydachevskiy  
OMEE-2009 Organizing  
Committee Secretary

## Swedish System-on-Chip Conference Focuses on Meter to Nanometer Scale Electronics R&D

9th Annual SSoCC Sponsored by SSCS-Sweden Chapter and Lund University in May

The 9th Swedish System-on-Chip Conference (SSoCC'09) was held at Lund University on 4-5 May. It was organized by the Sweden Chapter of the IEEE Solid-State Circuits Soci-

ety, with the help of an SSCS chapter subsidy and with local support from the department of Electrical and Information Technology (EIT) at Lund University.

Founded in 1666, Lund is the largest university in Scandinavia, with a full curriculum and several strong research groups focusing on devices, circuits, and telecommunications research.



At SSoCC'09, Sweden Chapter Chairman Svante Signell, fifth from left sitting, Vice Chairman Jerzy Dabrowski fourth left sitting and Secretary Martin Andersson, seventh left sitting.



Best Student Paper and Presentation Award Winner, Rashad Ramzan (at left), receives his prize from the award committee chair, Prof. Kjell Jepssson.

The greater Lund area, in the southernmost part of Sweden, currently accommodates more than 6,000 employees working in companies including Ericsson, ST-Ericsson, SonyEricsson, and Axis Communications. Located in nearby Copenhagen are Nokia, Bang Olufsen, Thrane&Thrane, Oticon, GN ReSound, and several others.

#### Four Invited Speakers Elaborate on Conference Theme “Meter- to Nanometer Scale Electronics R&D”

Prof. Li-Rong Zheng, director of the iPack VINN Excellence Center at KTH, gave an overview of the latest developments within RFID and wireless sensors for intelligent paper and package applications.

Dr. Roland Strandberg, Ericsson AB, Lund, focused on radio interface challenges in mobile connected devices using LTE. Some of these are the flexible bandwidth and spectrum aggregation of LTE schemes, which require a multi-mode terminal with graceful power scaling consuming no more power than necessary for a given task. Another problem is how to handle the high data rates in baseband that generate power consumption, heat, and increased cost (area for memories and buffers).

Assistant Prof. Dejan Markovic of UCLA discussed optimization and rapid prototyping of power-limited

digital systems. He said that UCLA researchers are focusing on the key challenges for achieving high performance despite power-limited scaling while at the same time increasing design complexity and flexibility. He said their approach is to use MATLAB-based system-power-area optimization and automated DSP architecture transformations. Prof. Markovic concluded that the energy efficiency of the investigated systems was improved by up to ten times by properly optimized implementations.

Prof. Lars-Erik Wernersson, Lund University, gave an overview of the latest nanoscale device research by his research group in a presentation titled “From Macro to Nano: More Moore or More Than Moore?”

#### Program Sessions Survey SoC Research in Sweden

Thirty-four technical papers presented in four parallel sessions surveyed the wide range of SoC-related research activities going on in Sweden and covered the latest progress in the analysis, modeling, and design of A/D converters, mixed signal systems, RF circuits and systems, nano technologies, digital filters and system architectures.

In addition, the Best Student Paper and Presentation Award was given to the paper “A 0.5–6 GHz RF Front-End for Multistandard Receivers in 90 nm

CMOS” by Rashad Ramzan, N. Ahsan, J. Dabrowski, and C. Svensson.

Every year since 2000, SSoCC has convened IC designers, companies, Ph.D students, and senior researchers working in Sweden on different aspects of SoC design to inspire and support networking and to discuss the latest developments and to brainstorm on future directions for research on advanced integrated circuits and systems, all of interest to the SSCS.

SSoCC is traditionally located close to the main Swedish technical Universities: Royal Institute of Technology (KTH), Chalmers University of Technology, Lund University and Linköping University. In 2006, the SSCS-Sweden chapter took over the organization of the conference. The organizing committee has consisted of the chapter's board with the help of local support.

SSoCC 2009 took place at Hotel Rusthällargården, Arild, an idyllic spot with local skånian (southern Sweden) traditions and the fragrance of the open seas. This year's 62 participants (23 IC professionals and 39 Ph.D. students) enjoyed culinary delights, complete with wines from a well-stocked wine cellar, served at the conference dinner.

SSoCC 2009 was an important trend breaker, with a significant increase in the number of participants compared to last year. Thanks to this year's generous financial support from IEEE SSCS and the Swedish Foundation for Strategic Research (SSF) a 50% student discount on the conference fee was possible.

Next year's tenth anniversary meeting will be arranged with local support from Linköping University.

For more information, please visit <http://ssocc2009.eit.lth.se/> for SSoCC and <http://sscs.eit.lth.se/> for activities in the Sweden Chapter.

—Martin Andersson  
Secretary and Information Officer  
IEEE SSCS Sweden  
Svante Signell, Chapter Chair,  
IEEE SSCS Sweden

