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Introduction

The volume contains selected papers presented at the International Conference "Micro- and Nano-Electronics 2014" (ICMNE-2014) which was held in Zvenigirod, Moscow Region, Russia 6–10 October 2014. ICMNE is a biannual conference covering the main fields of micro- and nano-electronic technologies and device physics. Since 1992, the Institute of Physics and Technology (Moscow, Russian Federation) has been the permanent organizer of ICMNE, and it became an SPIE-affiliated conference in 2003.

ICMNE-2014 included an extended session, "Quantum Informatics 2014". The ICMNE-2014 scope contained such scientific and technological fields as micro- and nano-electronic materials and films; technologies and equipment; metrology, physics and technologies of micro- and nano-devices; simulation and modeling; silicon-on-insulator and low-dimensional structures; and quantum informatics. ICMNE-2014 included three plenary sessions and 19 topical sessions focusing on the following areas:

- Physics and Technology of Micro- and Nano-Devices
- Materials and Films
- Quantum Informatics
- Silicon-on-Insulator and Low-Dimensional Structures
- Simulation and Modeling
- Micro- and Nano-Electronics Technologies and Equipment
- Metrology and Characterization
- Superconducting Structures and Devices

The scientific program was based on invited and contributed papers from the scientists employed at European and Siberian Regions of Russia, Armenia, Belarus, Belgium, Germany, France, United States, and Japan. The invited lectures on the current achievements and challenges in the contemporary microelectronics were delivered by the scientists from France, Belgium, Germany, France, Japan, and Russia. The session contributions were made by academic institutions and universities, as well as from industry. About 100 contributions were oral presentations and about 80 were presented as posters.

We hope these sessions resulted in helpful discussions at the session and between attendees will promote continuing research activity in the microelectronic community. Additional information about ICMNE-2014 can be found at the conference website http://www. icmne.ftian.ru

Alexander A. Orlikovsky