
Vladimir F. Lukichev
Konstantin V. Rudenko
Editors

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Introduction

The volume contains selected papers presented at the International Conference "Micro- and Nanoelectronics – 2016" (ICMNE-2016) which has been held in Zvenigorod, Moscow Region, Russia during October 3-7, 2016. ICMNE is a biannual conference covering the main fields of micro- and nanoelectronic technologies and device physics. Since 1992 the Institute of Physics and Technology (Moscow, Russia) is the permanent organizer of ICMNE. From 2003 ICMNE is an SPIE-affiliated conference. ICMNE-2016 included the Extended Session "Quantum Informatics-2016". The ICMNE-2016 scope contained such scientific and technological fields as micro- and nanoelectronic materials and films, technologies and equipment, metrology, physics and technologies of micro- and nanodevices, simulation and modeling, MEMS and NEMS physics and technology, quantum informatics. ICMNE-2016 included three plenary sessions and 18 topical sessions covering the following areas of focus:

- Physics of Nanotransistors, Photonic Devices, and Memory Cells
- Materials and Films
- Advanced Lithography
- Superconducting and Spintronics Devices
- Plasma-Based Technologies
- Quantum Informatics
- Simulation and Modeling and Simulation of Semiconductor Devices
- MEMS and NEMS
- Metrology and Characterization

The scientific program was based on invited and contributed papers from the scientists employed at European and Siberian Regions of Russia, Azerbaijan, Belarus, Poland, Germany, France, Korea, Japan, and India. The invited lectures on the current achievements and challenges in the contemporary microelectronics were delivered by the scientists from Germany, Japan, and Russia. The contributions to the sessions of the Conference were made by academic institutions, universities as well as from the industry. More than 100 contributions were discussed at oral presentations; about 120 others were presented as posters.

We hope that helpful discussions of these works at the sessions of the Conference and during personal contacts between attendees will promote the research activity in microelectronic community. Additional information about ICMNE-2016 can be found at the conference website http://www.icmne.ftian.ru

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