



## Symposium and Summer School on:

## Nano and Giga Challenges in Microelectronics

## Research and Opportunities in Russia

Moscow, September 10-13, 2002

<http://www.AtomicScaleDesign.Net/Moscow>

### Abstract Submission

1. **Online:** Please submit your abstract online at:  
<http://www.asdn.net/moscow/speaker-info.shtml>
2. **By E-mail:** Please send as an attachment to:  
organizers@AtomicScaleDesign.Net

Abstracts are due by **May 10, 2002**. For further details, please, check our Web site.

### Publication of Proceedings

Proceedings will be published by Elsevier in a special issue of Microelectronic Engineering (Symposium papers) and in a book (Summer School papers and selected review papers presented at the Symposium) Manuscripts must be submitted electronically prior or at the conference, and will be peer reviewed.

### Speakers

Gennadi Bersuker, Alex Bratkovski, Bruno Chaudret, Ramon Compano, Gabriel Crean, Roger Elliott, David Ferry, Julian Gale, David Gilmer, Willam Goddard III, Eugene Golant, Alexander Granovski, David Graves, Vladimir Gritsenko, Detlev Gruetzmacher, Evgeni Gusev, Takeo Hattori, Scott Hector, Howard Huff, Mitsuteru Inoue, Natalia Kirova, Nikolay Kukhtarev, Kaupo Kukli, Patrick Lenahan, Konstantin Likharev, Gerald Lucovsky, Evgeni Meilikhov, Oleg Okhotnikov, Alexander Popov, Efim Portnoj, Victor Printz, Ronald Pyle, Nikolai Rambidi, Mark Schattenburg, Otto Sankey, Konstantin Svidzinskiy, Peter Ventzek, Victor Veselago, Alex Volinsky, Ken-Ichi Ueda

### Conference Co-Chairmen

Evgeniy Velikhov (Kurchatov Institute, Russia)  
Andreas Wild (DDL Motorola, Germany)

### Organizing & Program Committee

Boris Aronzon, Alexander Bagatur'yants, Gennadi Bersuker, Vladimir Betelin, Dmitry Borisov, Bruno Chaudret, Evgeniya Davidova, Alex Demkov, Rickey Faehl, Stanislav Fedulov, Konstantin Golant, Alexey Golubev, Jim Greer, Evgeniy Gusev, Pavel Kashkarov, Anatoli Korokin (co-chairman), Jan Labanowski, Maria Oseeva, Dmitry Panfilov, Boris Potapkin (co-chairman), Doug Resnick, Irene Rybakova, Elena Shulakova, Alex Volinsky, Alexander Zakharov, Yekaterina Zikeeva

### Scientific & Advisory Board

Michail Alfimov, Vitaliy Aristov, Boris Borisov, Rick Brzozowy, Evgeniy Dianov, Edward Hall, Takeo Hattori, Siegfried Hecker, Radiy Il'kayev, William Johnson, Carl Kutche, Gerald Lucovsky, Evgeniy Meilikhov (co-chairman), Marius Orłowski (co-chairman), David Pappas, Vladimir Rusanov, Paul Siffert, Jim Toevs

### Conference Sponsors

Digital DNA Lab Motorola, Russian Research Center Kurchatov Institute, Nuclear Cities Initiative, Nuclear Threat Initiative, Moscow State University, Russian Federal Nuclear Center, European Office of Aerospace Research and Development United States Air Force

### Venue

**Summer School:** Department of Physics, Moscow State University,

**Symposium:** Palace of Science of the Russian Academy of Sciences

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### Conference Background

An essential enabler of the information society -- microelectronics -- is a field at the threshold of a new phase. The next stage, involving nanometer scale structures, and integration levels including billions of transistors, presents a number of unprecedented challenges in their practical realization, and requires new materials, new technologies in photolithography and semiconductor processing, new devices, and new design strategies.

Russia, with its large intellectual potential, outstanding education system, and strong scientific tradition, is in the position to make a significant contribution toward solving these challenges. This meeting is dedicated to bringing together scientists and engineers from academia, industry and national labs to discuss recent achievements and collaborative efforts in solving these problems.

### Meeting Format

The scientific program includes a Summer School (first 2 days) and a Symposium (last 2 days). The Summer School program consists of tutorial (plenary) lectures followed by panel discussions involving both participants and speakers. The Symposium includes plenary sections in the morning, which are followed by oral presentations and poster sessions in the afternoon. Evening sessions will focus on technology trends and collaborative discussions.

### Technical Scope

Abstracts are invited in the following areas:

- atomic scale design: theory and experiment
- fabrication of nanodevices
- highest frequency electronics
- integrated and subwave optoelectronics
- magnetic materials and spintronics
- molecular electronics
- new materials and processes for future FETs
- nanotubes: future wires and other devices
- non-silicon materials and devices
- predicting global technology trends
- quantum effects in devices
- system design technologies
- tutorials on nanotechnology and nanoelectronics

### Accommodations

A variety of hotel and lodging options will be suggested shortly by organizers. Group discounts will be announced shortly for the registered participants. General information about hotel prices is available at: <http://www.moscow-hotels.net/>

Social programs will be available for participants and accompanying persons.

### Visa Information

Organizers will provide invitation letters to registered participants and speakers (paid fees). Details are available at <http://www.asdn.net/moscow/visa.shtml> or from Evgeniya Davidova ([davidova@kintech.ru](mailto:davidova@kintech.ru))

### Registration

Online registration: [www.asdn.net/moscow/](http://www.asdn.net/moscow/)  
By e-mail: [alex.volinsky@motorola.com](mailto:alex.volinsky@motorola.com)

By mail (registration & conference fee):  
Ohio Supercomputer Center  
Nano and Giga Symposium  
Attn. Jan K. Labanowski  
1224 Kinnear Rd  
Columbus, OH 43212-1163, USA

along with a check or money order (issued in US Dollars) payable to "Nano and Giga Symposium". If you prefer to pay via bank/wire transfer, please contact us for the SWIFT code and account number at [organizers@asdn.net](mailto:organizers@asdn.net) and we will promptly provide you with the information.

Early Registration Fee -- By June 1, 2002:  
Regular participants: 200 US Dollars;  
Full time students: 100 US Dollars

Registration Fee after June 1, 2002:  
Regular participants: 300 US Dollars;  
Full time students: 150 US Dollars

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Country: \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

Email: \_\_\_\_\_

Registration fee will be fully reimbursed if cancellation is received before July 1, 2002. After this date, a service fee of 20% will be charged on cancelled registrations.