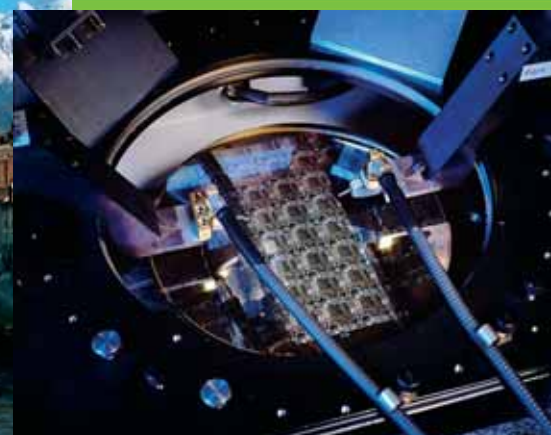
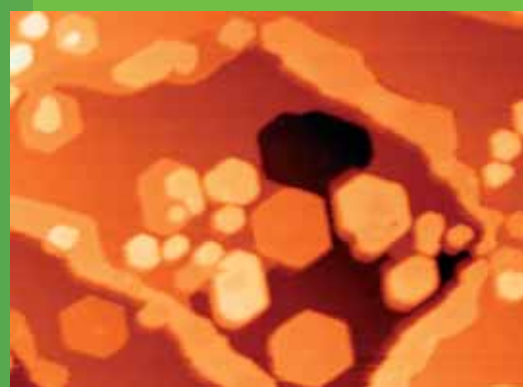


ESONN'06

europaean school
on nanosciences
& nanotechnologies

August 27th - September 16th 2006
Grenoble, France



<http://www.esonn.inpg.fr>

Organized by

- Université Joseph Fourier (UJF)
- Institut National Polytechnique de Grenoble (INPG)

Co-organized by

- CNRS (Centre National de la Recherche Scientifique)
- CEA (Commissariat à l'Energie Atomique)

Directed by

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ESONN'2006 (third edition) is a three-week course aimed at providing training for graduate students, postdoctoral and junior scientists from universities and laboratories in the field of **NANOSCIENCES** and **NANOTECHNOLOGIES**. Two sessions will run in parallel, with a main emphasis on Physics or Biology. Interdisciplinarity between Physics, Biology and Chemistry will be emphasized. The academic and practical courses will cover the elaboration, the functioning and the characterisation of nano-objects.

PROGRAM

LECTURES

Session A - 22 x 1h45

1. Mesoscopic transport
Markus Büttiker, Geneva
2. Single-electron effects
Jan Martinek, Poznan
3. Molecular electronics
Marcelo Goffman, Saclay
4. Spintronics
Chris Marrows, Leeds
5. Physics of devices
Enrico Sangiorgi, Udine
6. Qbits implementation
Elisabetta Paladino, Catania
7. Nano- and quantum-optics
Oliver Benson, Berlin

Common lectures - 12 x 1h45

1. Technologies of nanofabrication
Giancarlo Faini, Marcoussis
2. Near-field microscopies
Hans Hug, Basel
3. Neuro-electronics
Peter Fromherz, Munich
4. Soft nanomaterials
Ian Hamley, Reading

Common seminars

Seminars given by researchers from the Grenoble area will be proposed.

Session B - 22 x 1h45

1. Surface and molecule physico-chemistry
Alain Brisson, Bordeaux
2. Advanced biophysics for designing micro-systems
Ruud Hovius and Jean-Manuel Segura, Lausanne
3. Mechanics of molecules and biological structures
Thomas Duke, Cambridge
4. Immunochemistry and biosensors
Daniele Altschuh, Strasbourg
5. Microfluidics for lab-on-chips
Patrick Tabeling, Paris
6. Biological applications of microelectrodes
Christian Amatore, Paris

PRACTICALS

The program emphasizes the role of "hands-on" activities: Half of the program is devoted to practicals. Practical activities will be held in clean room facilities (Inter-university Centre for Microelectronics - CIME - Grenoble) and in research laboratories. Experiments in laboratories are presented by researchers on their current research and are thus at the leading edge of the international research (see the related section on the web site).

<http://www.esonn.inpg.fr>



Rhône-Alpes