



**SINANO-NANOSIL Workshop:
“Si-based Nanodevices for ultimate CMOS and beyond-CMOS”**

Organised by: Francis Balestra, IMEP (CNRS-Grenoble INP-UJF), Sinano Institute

This Workshop aims to establish a discussion forum in the field of nanoelectronics devices. This Workshop is supported by the SINANO Institute, which is a new European entity founded by the main laboratories of the European academic community working in this field, and by the European Network of Excellence NANOSIL devoted to Silicon-based Nanodevices funded by the European Commission for the 7th Framework Programme.

Over the next quarter century considerable challenges exist to push the limits of silicon integration down to nanometric dimensions and to enhance device performance in order to meet the ever increasing demands of communication and computing. The aim of this Workshop is to present the status and trends of CMOS and beyond-CMOS nanodevices for terascale ICs.

Programme:

- 9:00 New channel materials for ultimate CMOS
Siegfried Mantl, Institut für Bio- und Nanosysteme, Forschungszentrum Juelich
- 9:30 Innovative device architectures for Nanoscale CMOS
Nadine Collaert, IMEC
- 10:00 Refreshment break
- 10:30 Comparative analysis of Stress-induced performance enhancement in NMOS and PMOS transistors
David Esseni, Udine University
- 11:00 Characterisation methods for Nanodevices
Sorin Cristoloveanu, IMEP
- 11:30 Emerging Nanotechnology for integration of Nanostructures in Nanoelectronic devices
Thierry Baron, LTM
- 12:00 Lunch
- 13:30 Small Slope Switches
Adrian Ionescu, EPFL
- 14:00 3D Multichannels and stacked Nanowires Technologies
Thomas Ernst, LETI
- 14:30 Carbon Nanotube - Silicon heterojunctions for Nanoelectronics and Nanosensors

Jimmy Xu, Brown University

15:00 Atomic functionalities in Silicon devices: go beyond the FET by using single dopants and artificial silicon atoms
Marc Sanquer, INAC

15:30 End of the Workshop