

International Symposium

Along the Frontiers of Nanoelectronics: from Nanoimprinting to Nanoenergy

Chairpersons: P. Lugli (TUM) and W. Porod (Notre Dame University)

TUM Institute for Advanced Study
TUM-IAS Auditorium
Lichtenbergstraße 2 a
Garching

The TUM Institute of Advanced Study, the Excellence Cluster Nanosystem Initiative Munich and the TUM-Institute for Nanoelectronics are organizing a two days international workshop that will be held at the TUM-IAS building in Garching. Motivation for such workshop is threefold: we will have a session on Nanoimprinting Technologies as final event for the IAS Fellowships of Prof. Wolfgang Porod and Prof. Khaled Karrai. Then a session on “Nano-energy” as a kick-off for the IAS Fellowship that Stephen M. Goodnick has just received. Finally, we will have an overview of the most recent advances in the areas of “Nanostructures” and “Nanoarchitectures” to celebrate the 10 years anniversary of the TUM Institute for Nanoelectronics.

Attendance of the Workshop of free of charge but a registration is required. For further information and registration please contact nano@ei.tum.de.

PROGRAM

March 11th, 2013 – TUM-IAS Focus Group “Nanoimprint and Nanotransfer” - Closing Symposium

- 9.00 P. Lugli (TUM-EI) – Overview of the Focus Group activities
- 9.15 S. Chou (Princeton Uni., Princeton) – Key Technologies for Large-area Nanoimprint, Particularly for Energy Harvesting and Ultrasensitive Bio/Chem Detection Applications.
- 10.00 W. Porod (Notre Dame) – THz nanoantenna arrays
- 10.30 *Coffee break*
- 11.00 G. Bernstein (Uni. Notre Dame, USA) – Toward Practical Nanomagnet Logic Systems
- 11.30 A. Imtaar (TUM-EI) – Nanoimprinting for Nanomagnetic Logics
- 11.45 T. Haeberle (TUM-EI) – Nanotransfer Printing with Unconventional Stamps
- 12.00 K. Karrai (Attocube System) – Interferometric displacement sensors
- 12.30 *Lunch*

March 11th, 2013 – Minisymposium on “Nanoarchitectures”

- 14.00 T. Roska (Pazmany Univ, Budapest) – Dynamic Non-Boolean Array Architecture for Detecting 2D Objects and Spatial-temporal Events
- 14.30 A. Rodriguez Vasquez (Uni. Seville) – Architectural Solutions for Intelligent CMOS Image Sensors
- 15.00 R. Tetzlaff (TU Dresden) – Identification of Nonlinear Systems by Cellular Nonlinear Networks: Soliton Dynamics

- 15.30 *coffee break*
- 16.30 Robert Hölzel (TUM-PH) – Nanocomputing with Spin-Torque Oscillators
- 17.00 M. Graziano (Politecnico Torino) – Silicon Nanoarrays: from Architecture Exploration to Circuit Design and Characterization
- 17.30 H. Gräß (TUM-EI) - Challenges in Design Automation of Analog Integrated Circuits
- 18.00 *End*

March 12th, 2013 – Minisymposium on “Novel Nanostructures”

- 9.00 L. Torsi (Uni. Bari) – Organic Field-Effect Transistor Biosensors
- 9.30 H. Klauk (MPI Stuttgart) – Organic Thin-Film Transistors for Flexible Active-Matrix Displays
- 10.00 M. Remskar (Stefan Inst, Ljubljana) – MoS₂ and WS₂ Nanotubes and their Respective Oxides
- 10.30 *Coffee break*
- 11.00 J. Garrido (TUM-WSI) – Graphene biosensors
- 11.30 H. Kurz (AMO-Aachen) – Relaxation Processes in Graphene
- 12.00 E. Molinari (Uni. Modena-Reggio Emilia) – Graphene nanoribbons
- 12.30 A. Holleitner (TUM-ZNN) – Ultrafast photodetectors based on CNTs and graphene
- 13.00 *Lunch*

March 12th, 2013 – TUM-IAS Focus Group “Nanoscience for renewable energy sources” - Kick-off Symposium

- 14.30 Patrick Dewilde (TUM-IAS) – TUM Institute for Advanced Study
- 14.45 S.M. Goodnick (ASU, Tempe) – Next Generation Photovoltaics
- 15.30 D. Popescu (TUM-EI) – Simulation of organic solar cells
- 15.45 A. Di Carlo (Uni. Rome Tor Vergata, Rome) – Dye Sensitized Solar Cells
- 16.15 A. Abdellah (TUM-EI) – Spray Coating Technologies for Organic Solar Cells
- 16.45 *End*