

Workshop on *Nanostructures in biology and physics*

WPI thematic program *Nanostructures in biology and physics*, organized by Clemens Heitzinger, Norbert Mauser, and Christian Ringhofer
July 21 to July 25, 2008 at WPI, University of Vienna

| | Tuesday, July 22 | Wednesday, July 23 | Thursday, July 24 | Friday, July 25 |
|--------------|--|--|---|---|
| 9:30—10:30 | Robert Blick (U. of Wisconsin-Madison): <i>Radio-frequency rectification and transmission on bilipid membrane bound pores</i> | Peter Ertl (Austrian Research Centers): <i>Monitoring cytotoxicities of nanoparticles using a lab-on-a-chip</i> | Dirk Gillespie (Rush Univ. Medical Center): <i>Energetics of ion selectivity in a biological calcium-selective ion channel</i> | Dieter Baurecht (U. of Vienna): <i>Investigation of the arrangement of biomolecules on Si and Ge surfaces by FTIR-ATR spectroscopy</i> |
| 10:30—10:45 | Coffee break | Coffee break | Coffee break | Coffee break |
| 10:45—11:45 | Marta Prada (U. of Wisconsin-Madison): <i>Long-lived states in Si-based quantum computing nano-architectures</i> | Clemens Heitzinger (WPI, U. of Vienna): <i>Multi-scale modeling and simulation of field-effect biosensors</i> | Heidrun Karlic (Ludwig Boltzmann Society, Vienna): <i>Nano-targets in cancer stem cells</i> | Monika Valisko (U. of Pannonia): <i>Competition of steric repulsion and electrostatic attraction determines the selectivity of calcium channels</i> |
| 11:45—13:30 | Lunch break | Lunch break | Lunch break | Lunch break |
| 13:30—14:30 | Arshak Poghossian (FZ Jülich): <i>Label-free detection of charged macromolecules with field-effect devices: possible mechanisms of signal generation</i> | Susan Rempe (Sandia): <i>Ion discrimination by nanoscale design</i> | Dragica Vasileska (ASU): <i>Quantum and thermal effects in nanoscale devices</i> | |
| 14:30—14:45 | Coffee break | Coffee break | Coffee break | Coffee break |
| 14:45—15:45 | Yang Liu (Stanford): <i>Recent progress in simulations of nanoscale biological sensors</i> | Dezso Boda (U. of Pannonia): <i>Double layers are everywhere</i> | Roland Roth (MPI für Metallforschung): <i>Density functional theory as a tool to study nanostructures in physics and biology</i> | |
| Social event | Heuriger (TBD) | | | |

Practical information for visitors can be found at <http://www.wpi.ac.at/address.php> . — Please talk to Ms. Preuss regarding reimbursements while you are in Vienna. — Wireless internet access is available, please ask in the office for username and password.