

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