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|  | <p>Goettingen-Pune Physics Workshop</p> <p>University of Pune, Pune</p> <p>February 27-28, 2009</p> |  |
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| ORGANIZED BY | |
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| Faculty of Physics Goettingen-India Office, Pune University of Goettingen Goettingen, Germany | Physics Department University of Pune Ganeshkhind Pune, India |

| ORGANIZING COMMITTEE | |
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| Vivek Asgekar Philip Gegenwart Dinesh Amalnerkar R. Ramachandran Ramesh Ahuja | University of Pune University of Goettingen Center for Materials for Electronics Technology (C-MET) Indian Institute of Science, Education & Research(IISER) University of Goettingen |

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| VENUE |
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| PHYSICS DEPARTMENT, UNIVERSITY OF PUNE |

FRIDAY, FEBRUARY 27, 2009**09:00 - 13:00 Laboratory Visits**

09:30 - 11:00 Visit C-MET

11:00 - 12::30 Visit IISER

FRIDAY, FEBRUARY 27, 2009**14:00 - 16:30 SESSION I:
Condensed Matter Physics: Theory****SESSION CHAIRMAN: Sulabha Kulkarni, University of Pune, Pune**14:00 - 14:10 WELCOME, Introduction to UoP
Pandit Vidyasagar, Director BCUD, UoP14:10 - 14:45 Ballistic transport in quantum wires
Kurt Schoenhammer14:45 - 15:20 Melting at absolute zero: quantum phase transitions in condensed
matter
Phillip Gegenwart, I. Physics Institute UoG15:20 - 15:55 Computational many-body tools for correlated quantum systems
Thomas Pruschke, Institute for Theoretical Physics, UoG15:55 - 16:30 Transport in interacting electron systems
P. Durga Nandini, Department of Physics, UoP16:30 - 16:45 **Coffee Break****FRIDAY, FEBRUARY 27, 2009****16:45 - 19:00 SESSION II:
Condensed Matter Physics: Experimental****SESSION CHAIRMAN: G. Ambika , IISER, Pune**16:45 - 17:20 Application of ion beams to materials - from eV to GeV energies
Hans Hofsaess, II. Physics Institute, UoG17:20 - 17:55 Systematics of wide band gap semiconductor materials and processing for
device applications
Kiran Adhi, Department of Physics, UoP17:55 - 18:30 Novel iron-based superconductors
Jeevan Hirale, II. Physics Institute, UoG

18:30 - 19:30 Raman Memorial Conference (Concluding Session)

20:00 **Dinner**

SATURDAY, FEBRUARY 28, 2009

09:00 - 13:00

SESSION III:**Nonlinear Dynamics and Complex Systems****SESSION CHAIRMAN: Anjali Kshirsagar , University of Pune, Pune**

- 09:00 - 09:35 Sand dunes, nano-ripples, cell shapes: Instabilities of driven surfaces in granular, hard, and soft matter
Reiner Kree, Institute for Theoretical Physics, UoG
- 09:35 - 10:10 Field electron emission investigations on semiconducting oxide nanovariants
Mahendra More, Department of Physics, UoP
- 10:10 - 10:45 Calculus and dynamics on Fractals
A.D. Gangal, Department of Physics, UoP
- 10:45 - 11:00 **Coffee Break**
- 11:00 - 11:35 Synchronisation with variable time delay and reset
G.Ambika, Physics Dept., IISER, Pune
- 11:35 - 12:10 1/f noise and Quantum Chaos
M.S. Santhanam, Physics Dept., IISER, Pune
- 12:10 - 13:00 **Laboratory Visit**
- 13:00 - 14:00 **Lunch**

SATURDAY, FEBRUARY 28, 2009

14:00 - 18:00

FINAL SESSION:**COOPERATION PROJECTS****SESSION CHAIRMAN: Shailaja Mahamuni , Department of Physics, UoP**

- 14:00 - 14:35 Nanoscale Characterization of Solids with Scanning Tunneling Spectroscopy
Rainer Ulbrich, IV Physics Institute, UoG
- 14:35 - 15:10 Physics of confined electron systems : quantum dots
D. G. Kanhere, Center for modeling and Simulations, UoP
- 15:10 - 15:45 Nano-electronic Materials Program at C-MET
Dinesh Amalnerkar, C-MET, Pune
- 15:45 - 16:30 Interaction with M.Sc. students
- 16:30 - 17:45 Conclusions, Discussions and collaborative Projects
Moderators: Vivek Asgekar and Ramesh Ahuja
- 17:45 - 18:30 **Laboratory Visit**
- 19:00 **Dinner**