

The Mini-Workshop on the Frontiers of Computational Physics

October 1 – 2, 2007, Hong Kong

Institute of Theoretical Physics and Department of Physics
The Chinese University of Hong Kong

Program

Venue: Room 128, Science Centre North Block, CUHK, Shatin

Monday, October 01, 2007	
Morning Session	8:30, Departure from Regal Riverside Hotel
	9:00, Light breakfast, Ground Floor, Science Centre North Block
	9:30 – 10:00 Opening LIN Hai-Qing
	Chair: ZHU Shi-Yao Focus: Computational physics
	10:00 – 10:30 <i>Constrained variation in multiscale simulations</i> CHEN Shi-Yi , Department of Mechanical Engineering, The Johns Hopkins University, Baltimore
	10:30 – 11:00 <i>Moving grid methods in high space dimensions</i> TANG Tao , Department of Mathematics, Hong Kong Baptist University
	11:00 – 11:15 Coffee break
	11:15 – 11:45 <i>Fundamentals of impurity at growth front: above, below, and at the surface</i> WANG En-Ge , Institute of Physics, Chinese Academy of Sciences
	11:45 – 12:15 <i>Anomalous heat conduction and heat control at nanoscale: computational simulation and experiment</i> LI Bao-Wen , Department of Physics, National University of Singapore
12:15 – 12:45 <i>Theory and simulation of laser plasma acceleration and radiation</i> SHENG Zheng-Ming , Institute of Physics, Chinese Academy of Sciences	
Lunch	12:45 – 2:15

Afternoon Session	Chair: LIN Hai-Qing Focus: Computational and applied physics
	2:30 – 3:00 <i>Charged particle acceleration by intense laser interaction with matter</i> HE Xian-Tu , Institute of Applied Physics and Computational Mathematics, Chinese Academy of Sciences
	3:00 – 3:30 <i>Complementarity and uncertainty in a two-way interferometer</i> ZHU Shi-Yao , Department of Physics, Hong Kong Baptist University
	3:30 – 4:00 Coffee break and free discussions
	4:00 – 4:30 <i>On the spin current and spin Hall effects</i> LI You-Quan , Zhejiang Institute of Modern Physics, Zhejiang University
	4:30 – 5:00 <i>Quantum transition to self-trapping of BEC and its quantum entanglement manifestation</i> LIU Jie , Institute of Applied Physics and Computational Mathematics, Chinese Academy of Sciences
	5:00 – 5:30 <i>From pattern dynamics to fast ignition</i> ZHOU Cang-Tao , Institute of Applied Physics and Computational Mathematics, Chinese Academy of Sciences
	5:30 – 6:30 Discussions
Evening	6:30, Departure for the Banquet 7:30 – 10:00 Banquet

Tuesday, October 02, 2007

Morning Session	8:30, Departure from Regal Riverside Hotel
	9:00, Light breakfast, Ground Floor, Science Centre North Block
	Chair: LIU Jie Focus: Talks in the theme of posing problems for computational people to think
	9:30 – 10:00 <i>Theory for high temperature superconductivity</i> ZHANG Fu-Chun , Department of Physics, The University of Hong Kong
	10:00 – 10:30 <i>Anomalous Nernst effect in novel superconductors</i> XU Zhu-An , Department of Physics, Zhejiang University
	10:30 – 11:00 <i>Raman study of iodine single molecules and iodine single molecular chains accommodated in zeolite AEL channels</i> TANG Zi-Kang , Department of Physics, The Hong Kong University of Science & Technology
	11:00 – 11:15 Coffee break
	Chair: GU Shi-Jian
	11:15 – 11:45 <i>Unparticle physics</i> LUO Ming-Xing , Zhejiang Institute of Modern Physics, Physics Department, Zhejiang University
	11:45 – 12:15 <i>Interference effect in interaction between molecules and intense laser fields</i> CHEN Jing , Institute of Applied Physics and Computational Mathematics, Chinese Academy of Sciences
12:15 – 12:45 <i>Bose Josephson effect and quantum manipulation</i> FU Li-Bin , Institute of Applied Physics and Computational Mathematics, Chinese Academy of Sciences	
Lunch	12:45 – 2:00
Afternoon Session	2:00 – 6:00 Discussions and excursion