ISSP International Workshop and Symposium on

Computational Approaches to Quantum Critical Phenomena

Week 1 (July 17-21)

Monte Carlo Method and Magnetism

July 17		NATIONAL HOLIDAY
July 18	14:00- (A615)	**N. Kawashima** Quantuam Monte Carlo algorithm based on world-lines
July 19	14:00- (A614)	**A. Sandvik** An introduction to the stochastic series expansion method
July 20		OFF
July 21	11:00- (A616)	**N. Trivedi** Dynamics from Quantum Monte Carlo Simulations: Part I
	14:00- (A615)	**N. Trivedi** Dynamics from Quantum Monte Carlo Simulations: Part II

Week 2 (July 24-28)

Low-dimensional systems and density matrix renormalization group

July 24	14:00- (A615)	**T. Kato** Quantum Dissipative Systems
July 25	14:00- (A615)	**S. Miyashita** Magnetism in Nano-Scale Systems
July 26	11:00- (A614)	**K. Hida** Field Induced Multiple Reentrant Quantum Phase Transitions in Randomly Dimerized Antiferromagnetic S=1/2 Heisenberg Chains
	14:00- (A614)	**E. Jeckelmann** Introduction to the Density-Matrix Renormalization Group

July 27	11:00- (A615)	**E. Jeckelmann** Recent Developments in DMRG
	14:00- (A615)	**K. Okunishi** Is DMRG a renormalization group ? –unconventional introduction to DMRG–
July 28	14:00- (A615)	**C. Batista** Frustration in Low Dimensional Systems

Week 3 (July 31-Aug 4)

Novel numerical methods, fermion systems, and various applications

July 31	14:00- (A615)	**M. Imada** Fermion Simulations
Aug 1	11:00- (A615)	**Y. Motome** Exact diagonalization study of Mott transition in the Hubbard model on an anisotropic triangular lattice
	14:00- (A615)	**J. Corney** Gaussian Quantum Monte Carlo Methods
Aug 2	11:00- (A614)	**K. Harada** Loop Algorithms with Non-Binary Loops
	14:00- (A614)	**A. Sandvik** Quantum Monte Carlo simulations in the valence bond basis
Aug 3	11:00- (A615)	**P. Werner** A continuous-time solver for quantum impurity models
	14:00- (A615)	**S. Todo** Quantum Phase Transitions in Low Dimensional Magnets
Aug 4		OFF

Week 4 (Aug 7-11)

Analytical approaches and systematic numerical approaches

Aug 7	14:00- (A615)	**N. Prokofiev** Worm algorithm and its applications
Aug 8	14:00- (A615)	**M. Troyer** The ALPS Project: Open Source Software for Classical and Quantum Lattice Models