



Computational Methods for Strongly Correlated Systems and Nanomagnetism

Sponsor: 

Sunday, September 26

18:00 – 20:00 Registration and Reception

Monday, September 27

08:30 – 08:45 *Registration*
08:45 – 08:50 Welcome Address
08:50 – 10:30 Introduction to C++ (G. Brown)
10:30 – 11:00 *Coffee Break*
11:00 – 12:30 Classical Monte Carlo Simulations (H.G. Evertz)

12:30 – 14:00 *Lunch*

14:00 – 15:30 The Ψ -Mag Toolkit (T. Schulthess)
15:30 – 16:00 *Coffee Break*
16:00 – 18:00 Hands-on Session with the Ψ -Mag Toolkit

Tuesday, September 28

08:30 – 10:00 Introduction to ALPS and XML (S. Todo)
10:00 – 10:30 *Coffee Break*
10:30 – 12:00 Quantum Lattice Models and Exact Diagonalization (A. Läuchli)

12:00 – 14:00 *Lunch*

14:00 – 14:45 Advanced Exact Diagonalization (D. Poilblanc)
14:45 – 15:30 The Coupled Cluster Method (J. Richter)
15:30 – 16:00 *Coffee Break*
16:00 – 18:00 Hands-on Session with the ALPS Classical MC Tools

Wednesday, September 29

08:30 – 10:00	Path Integrals and Quantum Monte Carlo (S. Wessel)
10:00 – 10:30	<i>Coffee Break</i>
10:30 – 11:15	The Loop Algorithm (H.G. Evertz)
11:30 – 12:30	Presentation by AMD
12:30 – 14:00	<i>Lunch</i>
14:00 – 15:30	Hands-on Session with the ALPS Exact Diagonalization Tools
15:30	<i>Excursion</i>
	<i>Conference Dinner</i>

Thursday, September 30

08:30 – 10:00	The Directed Loop and Worm Algorithms (F. Alet and S. Trebst)
10:00 – 10:30	<i>Coffee Break</i>
10:30 – 12:00	Introduction to DMRG (R. Noack)
12:00 – 13:00	<i>Lunch</i>
13:00 – 14:45	Poster Session
14:45 – 15:30	Wang-Landau Sampling (S. Wessel)
15:30 – 16:00	<i>Coffee Break</i>
16:00 – 18:00	Hands-on Session with the ALPS QMC Tools

Friday, October 1

08:30 – 9:15	Series Expansion (S. Trebst)
09:15 – 10:00	Introduction to the DMRG Code (I. McCulloch)
10:00 – 10:30	<i>Coffee Break</i>
10:30 – 12:30	Hands-on Session with the DMRG Code
12:30 – 14:00	<i>Lunch</i>
14:00 – 14:45	Dynamics in Exact Diagonalization (D. Poilblanc)
14:45 – 15:30	Overview Dynamics in DMRG (U. Schollwöck)
15:30 – 16:00	<i>Coffee Break</i>
16:00 – 17:30	Dynamics in DMRG II (C. Kollath and S. Manmana)