

Program of the workshop on  
**Recent Developments in Dynamical Mean Field Theory**  
September 28-30, ETH Zurich

Monday, 28. 9. 2009

Siemens Auditorium, HIT (E floor)

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8:30 - 9:00 registration and welcome

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*Chair: Andrew Millis*

9:00 - 9:30 Mark Jarrell *Quantum Criticality at finite doping in the 2D Hubbard Model*

9:30 - 10:00 Olivier Parcollet *Cluster DMFT approach to orbital-selective Mott transition in momentum space*

10:00 - 10:30 Ansgar Liebsch *Low-energy collective mode and particle-hole asymmetry in the 2D Hubbard model studied within finite-temperature ED/CDMFT*

10:30 - 11:00 coffee break

11:00 - 11:30 Alexey Rubtsov *Dual fermions: a nonlocal extension of DMFT with high momentum resolution*

11:30 - 12:00 Silke Biermann *Realistic DMFT calculations for transition metal oxides and pnictides*

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12:00 - 14:00 lunch break

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*Chair: Antoine Georges*

14:00 - 14:30 Junya Otsuki *Magnetic and charge instabilities in the Kondo lattice*

14:30 - 15:00 Krzysztof Byczuk *Quantifying correlation and effects of disorder in the Hubbard model*

15:00 - 16:00 coffee break

16:00 - 16:30 Hartmut Monien *Optimal frequency grids for DMFT*

16:30 - 17:00 Thomas Schulthess *Numerical studies of a repulsive two-dimensional Hubbard model with disorder*

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*Chair: Mark Jarrell*

9:00 - 9:30	Karsten Held	<i>Dynamical vertex approximation - a step beyond DMFT</i>
9:30 - 10:00	Hartmut Hafermann	<i>Recent applications of the dual-fermion method</i>
10:00 - 10:30	Hiroaki Kusunose	<i>Superconductivity by spin fluctuations around DMFT</i>
10:30 - 11:00	coffee break	
11:00-11:30	Sergey Skornyakov	<i>LDA+DMFT method in Wannier functions basis: application to BaFe<sub>2</sub>As<sub>2</sub> spectral properties investigation</i>
11:30 - 12:00	Luis Craco	<i>Electronic correlations in transition metal compounds: A view from multi-orbital LDA+DMFT(IPT)</i>

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12:00 - 14:00                  lunch break

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*Chair: André-Marie Tremblay*

14:00 - 14:30	Dieter Vollhardt	<i>DMFT for correlated bosons and boson-fermion mixtures</i>
14:30 - 15:00	Akihisa Koga	<i>Ordered states in fermionic optical lattice systems: Real-space DMFT approach</i>
15:00 - 16:00	coffee break	
16:00 - 16:30	Nils Blümer	<i>DMFT simulations of ultracold fermions in optical lattices</i>
16:30 - 17:00	Martin Eckstein	<i>Dynamical mean-field theory for nonequilibrium</i>

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18:30 -                          conference dinner                  Restaurant "Waid"

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Wednesday, 30. 9. 2009

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*Chair: Dieter Vollhardt*

9:00 - 9:30	André-Marie Tremblay	<i>Mott transition and quantum cluster approaches</i>
9:30 - 10:00	Emanuel Gull	<i>Momentum-selective metal-insulator transition in the 2D Hubbard model</i>
10:00 - 10:30	Fakher Assaad	<i>Bilayer Hubbard model for <math>^3\text{He}</math>: a cluster dynamical mean-field study</i>
10:30 - 11:00	coffee break	
11:00 - 11:30	Michael Potthoff	<i>Accessing thermodynamics from dynamical cluster-embedding approaches</i>
11:30 - 12:00	Andrew Millis	<i>Optical Response in Cluster Dynamical Mean Field Theory: Vertex corrections and comparison to data</i>

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12:00 - 13:30 lunch break

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*Chair: Alexander Lichtenstein*

13:30 - 14:00	Frank Lechermann	<i>Realistic low-energy approach to strongly correlated systems: the LDA+slave-boson method</i>
14:00 - 14:30	Jan Kunes	<i>From a fluctuating to an intermediate valence: Yb under pressure</i>
14:30 - 15:00	coffee break	
15:00 - 15:30	Andreas Läuchli	<i>Krylov implementation of the hybridization expansion impurity solver</i>
15:30 - 16:00	Evgeny Kosik	<i>Diagrammatic Monte Carlo for the Hubbard Model</i>