

PROGRAM

| Time | Monday 26.06.2006 | Tuesday 27.06.2006 | Wednesday 28.06.2006 |
|---------------|------------------------------|-------------------------------|---------------------------------|
| 09:00 - 09:50 | | F. Furche | G. Kresse |
| 09:50 - 10:25 | | C. Hättig | U. Birkenheuer |
| 10:25 - 10:45 | | S. Pittalis | T. Scott |
| 10:45 - 11:15 | | Coffee | Coffee |
| 11:15 - 12:05 | | F. Manby | R. J. Harrison |
| 12:05 - 12:40 | Arrival | T. Fleig | M. Dolg |
| 13:00 - 14:30 | Lunch | Lunch | Lunch |
| 14:30 - 15:20 | K. Burke | M. Head-Gordon | Departure |
| 15:20 - 15:55 | C. van Wüllen | C. Ochsenfeld | |
| 15:55 - 16:25 | Coffee | Coffee | |
| 16:25 - 17:15 | P. Pulay | M. Nooijen | |
| 17:15 - 17:35 | S. Eckard | M. Hanrath | |
| 17:35 - 17:55 | E. Kordel | M. Nest | |
| 18:00 - 20:00 | Dinner | Conf. Dinner | |
| 20:00 - 23:00 | Poster | | |

Monday, 26 June 2006

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| 12:05 – 12:40 | Arrival |
| 13:00 – 14:30 | Lunch |
| 14:30 – 15:20 | K. Burke (Rutgers University, Piscataway) <i>Quantum defect in time-dependent density functional theory</i> |
| 15:20 – 15:55 | C. van Wüllen (TU Berlin) <i>Two-component quasirelativistic computational methods</i> |
| 15:55 – 16:25 | Coffee |
| 16:25 – 17:15 | P. Pulay (University of Arkansas, Fayetteville) <i>Using plane waves and Gaussians in molecular quantum chemistry</i> |
| 17:15 – 17:35 | S. Eckard (Universität Konstanz) <i>Border-region treatment in the field-adapted adjustable density matrix assembler</i> |
| 17:35 – 17:55 | E. Kordel (Universität Karlsruhe) <i>Analytic energy gradients for the MP2-R12 method</i> |
| 18:00 – 20:00 | Dinner |
| 20:00 – 23:00 | Poster |

Tuesday, 27 June 2006

- 09:00 – 09:50** **F. Furche** (Universität Karlsruhe)
RPA type correlation energy functionals
- 09:50 – 10:25** **C. Hättig** (Ruhr-Universität Bochum)
Coupled-cluster response theory with linear r_{12} corrections
- 10:25 – 10:45** **S. Pittalis** (FU Berlin)
Current spin density functional theory using orbital functionals
- 10:45 – 11:15** Coffee
- 11:15 – 12:05** **F. Manby** (University of Bristol)
Recent advances in explicitly correlated electronic structure theory
- 12:05 – 12:40** **T. Fleig** (Universität Düsseldorf)
Development of a relativistic 4-component multi-reference coupled cluster method
- 13:00 – 14:30** Lunch
- 14:30 – 15:20** **M. Head-Gordon** (University of California, Berkeley)
Fast computational methods for strongly correlated electrons: Status, challenges and recent applications
- 15:20 – 15:55** **C. Ochsenfeld** (Universität Tübingen)
Rigorous integral estimates for linear-scaling electron correlation methods
- 15:55 – 16:25** Coffee
- 16:25 – 17:15** **M. Nooijen** (University of Waterloo)
Parameterized single reference coupled cluster theory
- 17:15 – 17:35** **M. Hanrath** (Universität Köln)
Perturbative and connectivity analysis of $MR_{exp}T$
- 17:35 – 17:55** **M. Nest** (Universität Potsdam)
Correlated many electron dynamics with the multi-configuration time-dependent Hartree-Fock (MCTDHF) method
- 18:00 – 20:00** Conference Dinner

Wednesday, 28 June 2006

- 09:00 – 09:50** **G. Kresse** (Universität Wien)
Beyond the local density approximation: hybrid functionals and GW
- 09:50 – 10:25** **U. Birkenheuer** (MPI für Physik komplexer Systeme, Dresden)
Quantum chemical approaches for electron correlation in solids
- 10:25 – 10:45** **T. Scott** (RWTH Aachen)
Minimization of the node-location error in diffusion quantum Monte Carlo
- 10:45 – 11:15** Coffee
- 11:15 – 12:05** **R. J. Harrison** (Oak Ridge National Laboratory)
If you're not scared, you're not thinking big enough
- 12:05 – 12:40** **M. Dolg** (Universität Köln)
The Hartree-Fock-Wigner model for electron correlation – Implementation and first results for molecules
- 13:00 – 14:30** Lunch
- 14:30** Departure

Posters

- P-1** **T. B. Adler** (Universität Stuttgart)
Application of local explicit correlation methods to chemical reactions
- P-2** **S. R. Chinnamsetty** (MPI für Mathematik in den Naturwissenschaften, Leipzig)
Tensor product approximations in quantum chemistry
- P-3** **B. Doser** (Universität Tübingen)
Linear-scaling AO-MP2 by rigorous integral screening
- P-4** **R. Ermrich** (TU Dresden)
*Influence of an electric field on the optical properties of selected organic molecules
- a DFT based study*
- P-5** **R. Fondermann** (Universität Köln)
The Hartree-Fock-Wigner model for electron correlation – Implementation and first results for molecules
- P-6** **C. Friedrich** (Forschungszentrum Jülich)
All-electron GW approximation in the augmented-plane-wave basis-set limit
- P-7** **N. Gaston** (MPI für Physik komplexer Systeme, Dresden)
Lattice structure of mercury: Influence of electronic correlation
- P-8** **E. Goll** (Universität Stuttgart)
DFT/CC methods applied to van-der-Waals systems
- P-9** **A. W. Götz** (Universität Erlangen-Nürnberg)
An exact-exchange time-dependent density-functional method for molecules
- P-10** **M. E. Harding** (Universität Mainz)
Parallelization of CCSD and CCSD(T) energies, gradients and second derivatives
- P-11** **M. Heckert** (Universität Mainz)
Additivity scheme for equilibrium geometries based on coupled-cluster calculations combined with basis-set extrapolation techniques
- P-12** **H. Jiang** (Universität Frankfurt)
*Orbital-dependent representation of the correlation energy functional:
Properties of second order Kohn-Sham perturbation expansion*
- P-13** **D. Ködderitzsch** (Ludwig-Maximilians-Universität München)
A relativistic extension and efficient implementation of the non-local coherent potential approximation within the multiple-scattering KKR method
- P-14** **D. Ködderitzsch** (Ludwig-Maximilians-Universität München)
Implementation of a relativistic OPM method and application to free atoms

- P-15** **D. S. Lambrecht** (Universität Tübingen)
Multipole-based integral estimates for the rigorous description of distance dependence in two-electron integrals
- P-16** **N. N. Lathiotakis** (FU Berlin)
Reduced density matrix functional theory for periodic systems: Functionals and applications
- P-17** **R. A. Mata** (Universität Stuttgart)
Accurate prediction of activation enthalpies in enzymes using local correlation Methods
- P-18** **T. Metzroth** (Universität Mainz)
Performance of decomposition schemes for orbital energy denominator like quantities
- P-19** **G. Moritz** (Eidgenössische Technische Hochschule Zürich)
Convergence characteristics of quantum chemical density-matrix renormalization group (DMRG) calculations
- P-20** **C. Neiss** (Forschungszentrum Karlsruhe)
Explicitly-correlated coupled-cluster methods for nonlinear properties
- P-21** **M. Springborg** (Saarland-Universität Saarbrücken)
Efficient method for calculating the response of infinite periodic systems to finite electric fields
- P-22** **M. Taut** (IFW Dresden)
Jahn-Teller-effect in the Wigner crystal in quantum dots in a magnetic field
- P-23** **V. Tevekeliyska** (Saarland-Universität Saarbrücken)
Structural and electronic properties of sodium clusters with up to 60 atoms
- P-24** **E. Voloshina** (MPI für Physik komplexer Systems, Dresden)
The method of increments for metals: Generating and testing of localized orbitals