1st Leibniz MMS Days
- Program -

Mi., 27.01.2016

13:00 A. Mielke / V. John (WIAS) Opening
13:30 R. Wieland (ZALF) Spatial Analysis and Modeling Tool SAMT2, a spatial modeling tool kit written in Python
13:45 J. Polzehl (WIAS) R in statistical neuroscience research
14:00 O. Knoth (TROPOS) Compressible atmospheric modelling on unstructured grids
14:15 Coffee Break
14:45 K. Polthier (FU Berlin) Discrete Mathematics for Geometry Processing
15:30 H. Si (WIAS) Quality Tetrahedral Mesh Generation
15:45 Coffee Break

Parallel Session A:
16:15 P. May (LIN) Computational Modeling of Auditory Processing in the Brain
16:30 N. Reinsch (FBN) Taking account for covariances in the Bayesian estimation of genetic marker effects in backcross-experiments
16:45 B. Eldon (MfN) Gene genealogies in highly fecund populations with skewed offspring distributions
17:00 A. González (WIAS) An individual based model for the Lenski experiment

Parallel Session B:
16:15 T. Kreer (IPF) Theoretical Polymer Physics and Universality
16:30 O. Marquardt (PDI) Carrier confining mechanisms in axial (In,Ga)N/GaN nanowire heterostructures
16:45 G. Steinmeyer (MBI) Interaction of experiment and numerical simulation in optical filamentation and supercontinuum generation
17:00 M. Radziunas (WIAS) Modeling, simulations, and analysis of nonlinear dynamics in edge-emitting semiconductor lasers

17:15 Break

17:45 Pitching Introduction to Posters
18:15 Poster Session

Do., 28.01.2016

09:00 R. Klein (FU Berlin) How math helps structuring climate discussions
09:45 E. Becker (IAP) The closure problem in atmospheric circulation models: A new concept for anisotropic and scale-invariant diffusion
10:00 W. Dreyer (WIAS) Models of Lithium-Ion-Batteries: A paradigm for consistent modeling
10:15 U. Gräwe (IOW) Analysing one of the largest saltwater inflows into the Baltic Sea using a multi-nested setup
10:30 K. Klingbeil (IOW) Recent developments in the numerical methods of the coastal ocean model GETM
10:45 Coffee Break
11:15 O. Teschke (FIZ-KA) How could the formation of the Global Digital Mathematics Library support mathematical modeling and simulation?
11:30 F. Müller (FIZ-KA) Research Data in Mathematics
11:45 M. Runnwerth (TIB) Audiovisual research data in mathematics
12:00 T. Koprucki (WIAS) How the WIAS handles mathematical research data
12:15 Lunch Break
13:15 W. Sperber (FIZ-KA) Software information services: The swMATH database
13:30 Discussion on Research Data in Mathematical Modeling and Simulation
15:00 Coffee Break
15:30 Four parallel Round Table Discussions on
   • Statistics of Stochastic Processes
   • Scientific Software
   • Consistent Modelling
   • Visualization
16:30 Break
16:45 Research Software Engineering: State of the Art and Challenges
    (Panel Discussion, appr. 1h)
19:00 Conference Dinner

Fr., 29.01.2016
09:00 R. König (HKI) Applying Mixed Integer Linear Programming in the Biomedical Sciences
09:15 A. Caiazzo (WIAS) Challenges in patient-specific blood flow simulation
09:30 K. Wünnemann (MfN) Computer simulations of large, rapid, and violent geological processes: A multi-material, multi-rheology CFD-approach
09:45 R. Wolke (TROPOS) Coupled time-integration of atmospheric chemistry-transport processes by using multirate implicit-explicit schemes
10:00 Coffee Break
10:30 D. Kröner (MFO) Visualized results of transport processes in Biology and Geophysics
11:00 Report on the four Round Table Discussions
11:30 Final Discussion on MMS at Leibniz
   - appr. 12:45 : End of 1st Leibniz MMS Days -