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* -