Programme for the Annual Colloquim 2007 of
The International Graduiertenkolleg IGK 710
"Complex processes: Modeling, Simulation and Optimization"
Friday 1st, Saturday 2nd February 2008

Friday, 1st February, Morning Session

09:00–09:10	Prof. H. G. Bock	**Opening and Introduction**	Chair: Carmen
09:10–09:25	Jan Albersmeyer	*The lifted Newton method and it's application in optimization*	
09:25–09:40	Dörte Beigel	*Towards real-time optimization with PDE*	
09:40–09:55	Katrin Hatz	*Estimation of proprioceptive feedback parameters of a walking cat*	
09:55–10:10	Tillmann Lang	*Optimal control and design of an open-loop-stable bipedal robot*	
10:10–10:25	Andreas Potschka	*Parabolic PDE: exploiting structure in sensitivity computations*	
10:25–10:40	Leonard Wirsching	*Fast numerics for online optimization*	
10:40–11:00		Coffee Break	
11:00–11:10	Dr. W. G. Bessler	**Introduction**	Chair: Igor
11:10–11:25	Vitaliy Yurkiv	*Modeling and validation of heterogeneous catalytic processes in fuel cells*	
11:25–11:35	Prof. G. Reinelt	**Introduction**	
11:35–11:50	Jan-Hendrik Prinz	*Enhanced phase space sampling in biomolecular systems using metastability*	
11:50–12:00	Prof. B. Lesyng	**Introduction**	
12:00–12:15	Tomasz Berezniak	*Molecular simulation on RNA catalysis: the ribozyme-catalyzed Diels-Alder reaction as a complex process*	
12:15–14:00		Lunch Break	

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Friday, 1st February, Afternoon Session

14:00–14:10	Prof. M. Niezgódka	**Introduction**	Chair: Jan A.
14:10–14:25	Anna Fogtman	Arabidopsis thaliana *nuclear proteomics*	
14:25–14:40	Zuzanna Szymańska	t. b. a.	
14:40–14:50	Prof. J. Majewski	**Introduction**	
14:50–15:05	Michał Lopuszyński	*Modelling alloys - multiscale approaches*	
15:05–15:15	Prof. J. Langowski	**Introduction**	
15:15–15:30	Christian Fritsch	*Nucleoplasmic percolation clusters in the interphase cell nucleu*	
15:30–16:00		Coffee Break	
16:00–16:10	Prof. W. Jäger	**Introduction**	Chair: Philipp
16:10–16:25	Igor Doktorski	*Mechanics and branching morphogenesis*	
16:25–16:40	Carmen Ellsässer	*Simulation of neuronal processes in the olfactory bulb*	
16:40–16:55	An Le Thi Thanh	*Mathematical modelling and simulation of drug resistance in infectious diseases*	
17:10–17:25	Hamid Reza Noori	*Mathematical modelling of the neurochemical processes in schizophrenia*	
17:25–17:40	Frederic Weller	*Platelet deposition in non-parallel flow. Influence of shear stress, changes in surface reactivity, and thrombus growth*	
19:00–??:??		Dinner Apothekenkeller	

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Saturday, 2nd February

10:00–10:10	Prof. W. Jäger	**Introduction**	Chair: Frederic
10:10–10:25	Daniel Jungblut	*Image processing using modern graphics hardware*	
10:25–10:35	Prof. P. Schmelcher	**Introduction**	
10:35–10:50	Daniel Buchholz	*Calculation of electronic transport in semiconductor nanostructures*	
10:50–11:00	Dr. A. Kuleff	**Introduction**	
11:00–11:15	Philipp Demekhin	*Nuclear dynamics during the intermolecular coulombic decay: development of computational approaches and applications*	
11:15–11:30	Sören Kopelke	*Modeling interatomic coulombic decay*	
11:30–11:40	Prof. A. Stevens	**Introduction**	
11:40–12:05	Jan Fuhrmann	*From rest to motion: modeling the initiation of cell motility*	
12:05–12:15		**Elections of the speakers**	
12:15–13:00		Lunch Break	
13:00–13:10	Prof. R. Rannacher	**Introduction**	Chair: Andreas
13:10–13:25	Helke Hesse	t. b. a.	
13:25–13:40	Bärbel Janssen	*Numerical methods for the simulation of dynamics and transport mechanisms in lakes*	
13:40–13:55	Stefan Knauf	*Numerical simulation of free-surface flows with applications to ball bearings*	
13:55–14:10	Winnifried Wollner	*An adaptive interior point method for PDE optimization with constraints on the gradient of the state*	