



## 5th Monte Carlo Workshop

January 14th, 2011

**Venue:** Interdisciplinary Center for Scientific Computing (IWR)  
University of Heidelberg  
Room 432  
Im Neuenheimer Feld 368

### Schedule:

- |             |   |
|-------------|---|
| 8:55-9:00   | Welcome   |
| 9:00-9:20   | <b>Generalized-ensemble simulations and cluster algorithms</b><br>Martin Weigel (University of Mainz)   |
| 9:20-9:40   | <b>Ageing and relaxations far from equilibrium in stochastic processes without detailed balance</b><br>Malte Henkel (CNRS - Nancy Universite)   |
| 9:40-10:00  | <b>Parallel Tempering Algorithm for Computer Simulations of Critical Phenomena</b><br>Elmar Bittner (University of Heidelberg)  |
| 10:00-10:20 | <i>Coffee Break</i>   |
| 10:20-10:40 | <b>Application of Classical Monte Carlo Techniques to Quantum Error Correction</b><br>Ruben S. Andrist (ETH Zurich)   |
| 10:40-11:00 | <b>Challenges and (some) solutions in MC simulations of particle physics</b><br>Kurt Langfeld (University of Plymouth)  |
| 11:00-11:20 | <b>Using DFT-based MC simulations to describe soft matter: exploring the thermodynamic stability of mesoscopic structures in amphiphilic membranes</b><br>Kostas Ch. Daoulas, Yuki Norizoe and Marcus Müller<br>(University of Göttingen) |
| 11:20-11:40 | <i>Coffee Break</i>   |
| 11:40-12:00 | <b>Problems of parallel off-lattice Monte-Carlo</b><br>Olaf Lenz, Friederike Schmid (University of Mainz)   |
| 12:00-12:20 | <b>MC4PT* Monte Carlo Simulation Environment for Particle Therapy Applications</b><br>Mario Javier Perez-Rivas (Siemens AG)   |
| 12:20-13:20 | <i>Lunch Break / Poster Session</i><br>Posters  |



**Entanglements in globular polymer phases**

Daniel Reith (University of Mainz)

**Simulating the diffusion of particles through nano-pores**

Po-Hsien Lee (Bioinformatic Center of the University of Saarland)

Afternoon Talks

13:20-13:30

**Demixing of compact polymers chains in three dimensions**

Jesper Jesper Lykke Jacobsen (Laboratoire de Physique Theorique, Ecole Normale Supérieure)

13:40-14:00

**Self-entanglements in polymers and proteins: concepts and challenges**

Peter Virnau and Daniel Reith (University of Mainz)

14:00-14:20

**Reverse Monte Carlo for the analysis of Hi-C Data**

Miriam Fritsche (University of Heidelberg and Massachusetts Institut of Technology)

14:20-14:40

*Coffee Break*

14:40:15:00

**Monte Carlo Methods for Gene Regulation Networks**

Lars Kaderali (BIOQUNAT)

15:00-15:20

**Computer simulation of gene-genealogical models**

Bernhard Mehlig (University of Gothenburg)

15:20-15:40

**Investigating Linear And Circular DNA Under Confinement**

E. Werner, F. Persson, J. Tegenfeldt, and B. Mehlig (University of Gothenburg)

15:40-16:00

*Coffee Break*

16:00-16:20

**Sequential Monte Carlo**

Nicolas Chopin (ENSAE)

16:20-16:40

**Strategies for Parameter Uncertainty Analysis**

J. Vanlier, C. A. Tiemann, J. A. L. Jeneson, P. A. J. Hilbers, N. A. W. v. Riel (Eindhoven University of Technology)

16:40-17:00

**Bayesian inference for general Gaussian graphical models with application to multivariate lattice data**

Alex Lenkoski (University of Heidelberg), Adrian Dobra (University of Washington) and Abel Rodriguez (University of California, Santa Cruz)

19:00- ??:??

After Work Gathering: Kulturbrauerei Heidelberg

**Contact:**

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## How to get to the lecture theatre:

*From the Central Railway Station:*

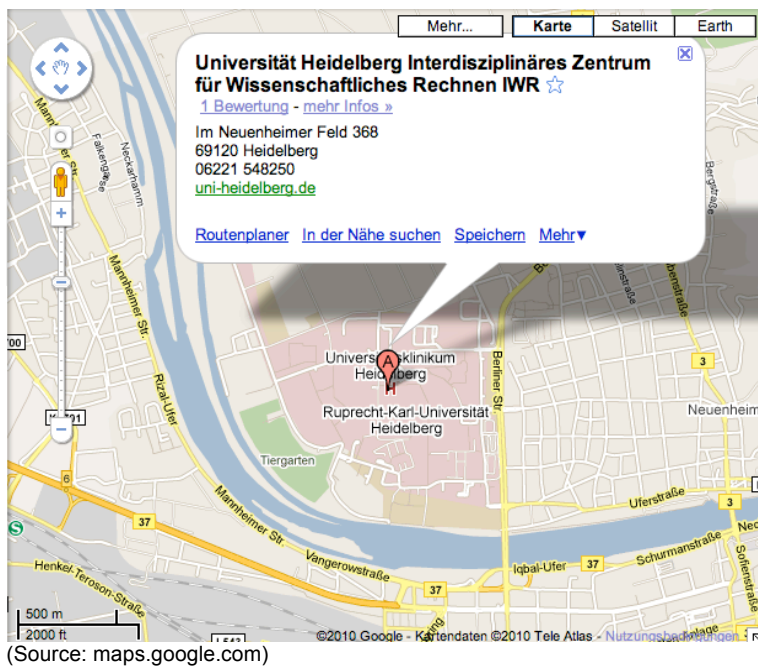
Take Bus No. 32 Direction: „Neuenheim Kopflinik“

Get off at the stop „Kopflinik“. To the right of the Kopflinik you will see a taller building that houses the IWR.

*From Heidelberg Bismarckplatz*

Take: Bus No. 31 Direction: Neuenheim, Chirurgische Klinik

Get off at the stop „Kopflinik“. To the left of the Kopflinik you will see a taller building that houses the IWR.





## How to get to the after work gathering:

From the bus stop „Kopfklinik“ take the

Take: Bus No. 31 Direction: Universitätsplatz

Get off at the stop „Bismarckplatz“.

Change to bus No. 35 Direktion „Neckargemünd, Bildungszentrum“

Get off at the stop „Neckarmünzplatz“. Follow the street that is orthogonal to the river leading into the old city. The Kulturbrauerei will be on your left hand side

