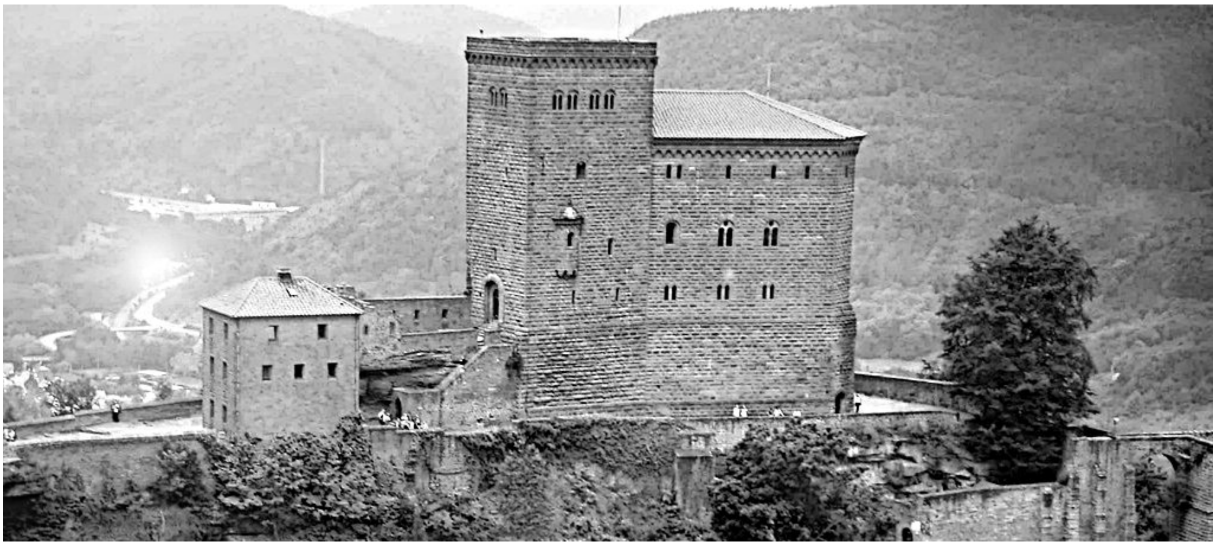
Workshop on Computational Stochastics

March 25-30, 2012

Annweiler



Organized by

- Stefan Geiß (Universität Innsbruck)
- Mike Giles (Oxford University)
- Peter Kloeden (Goethe-Universität Frankfurt)
- Andreas Neuenkirch (Universität Mannheim)
- Klaus Ritter (TU Kaiserslautern)

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FELIX KLEIN ZENTRUM FÜR MATHEMATIK

DFG SPP 1324

Program

Monday

Time	Speaker	*Title of Talk*
09:00-09:30	M. Kovacs (U of Otago)	*Numerical approximation of a class of stochastic PDEs arising in linear viscoelasticity*
09:45-10:15	T. Müller-Gronbach (U Passau)	*On the complexity of computing quadrature formulas for marginal distributions of SDEs*
10:30-11:15		–Coffee–
11:15-11:45	L. Szpruch (U of Oxford)	*Antithetic multilevel Monte Carlo method*
12:00-15:00		–Lunch Break–
15:00-15:30		–Coffee–
15:30-16:00	M. Tretyakov (U of Nottingham)	*Numerical integration of Heath-Jarrow-Morton model of interest rates*
16:15-16:45	G. Zouraris (U of Crete)	*On the convergence of the Crank-Nicolson method for a linear SPDE and Computable weak error approximation for the HJM term structure model*
18:30		–Dinner–

Tuesday

Time	Speaker	*Title of Talk*
09:00-09:30	S. Dahlke (U Marburg)	*Besov regularity for stochastic partial differential equations in Lipschitz domains*
09:45-10:15	O. Ernst (TU Freiberg)	*Probabilistic UQ for PDEs with random data: A case study*
10:30-11:00		–Coffee–
11:15-11:45	N. Marheineke (FAU Erlangen)	*Turbulent spinning processes - challenges on noise construction and numerics*
12:00-15:00		–Lunch Break–
15:00-15:30		–Coffee–
15:30-16:00	D. Belomestny (U Duisburg-Essen)	*On the complexity and the rates of convergence of simulation-based optimization algorithms for optimal stopping problems*
16:15-16:45	C. Reisinger (Oxford U)	*Multilevel simulation of SPDEs modelling particle systems*
18:30		–Dinner–

Wednesday

Time	Speaker	*Title of Talk*
09:00-09:30	A. Jentzen (Princeton U)	*Numerical approximations of stochastic differential equations with non-globally Lipschitz continuous coefficients*
09:45-10:15	T. Gerstner (U Frankfurt)	*Dimension- and time-adaptive multilevel Monte Carlo methods*
10:30-11:00		–Coffee–
11:00-11:30	D. Higham (U of Strathclyde)	*An implicit Milstein scheme for classes of nonlinear SDEs arising in finance*
11:45-12:15	E. Hausenblas (U Leoben)	*Pathwise space approximations of semi-linear parabolic SPDEs with multiplicative noise*
12:30-13:00		–Lunch Break–
afternoon		Excursion

Thursday

Time	Speaker	*Title of Talk*
09:00-09:30	R. Korn (TU Kaiserslautern)	*Recent advance in binomial methods in finance*
09:45-10:15	R. Tempone (KAUST)	*Adaptive multilevel Monte Carlo plus wave propagation in random discontinuous media*
10:30-11:15		–Coffee–
11:15-11:45	O. Iliev (Fraunhofer ITWM)	*On some industrial applications and open problems*
12:00-15:00		–Lunch Break–
15:00-15:30		–Coffee–
15:30-16:00	M. Giles (U of Oxford)	*Multilevel estimation of a cumulative distribution function*
16:15-16:45	S. Dereich (U Marburg)	*Constructive quantization: approximation by empirical measures*
18:30		–Dinner–

Friday

Time	Speaker	*Title of Talk*
09:00-09:30	S. Geiss (U Innsbruck)	*Different concepts of fractional smootness and applications*
09:45-10:15	A. Kohatsu-Higa (Ritsumeikan U)	*On weak approximation of stochastic differential equations with discontinuous drift coefficient*
10:30-11:15		–Coffee–
11:15-11:45	A. Neuenkirch (U Mannheim)	*Quadrature of discontinuous functionals of the Heston price using Malliavin integration by parts*
12:30		–Lunch–

Overview

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
09:00-09:30	Kovacs	Dahlke	Jentzen	Korn	Geiss
09:45-10:15	Müller-Gronbach	Ernst	Gerstner	Tempone	Kohatsu-Higa
10:30-11:00	-Coffeebreak-				
11:00-11:30			Higham		
11:15-11:45	Szpruch	Marheineke		Iliev	Neuenkirch
11:45-12:15			Hausenblas		
12:00-15:00	-Lunchbreak-				
15:00-15:30	-Coffeebreak-				
15:30-16:00	Tretyakov	Belomestny		Giles	
16:15-16:45	Zouraris	Reisinger		Dereich	
18:30	-Dinner-				