

# Program

## Monday, September 7, morning session

**Robert Beauwens**, opening (9h00-9h15)

**Karl Sabelfeld**, invited talk (9h15-10h25) Random boundary value problems: stochastic models and simulation

coffee break (10h25-10h55)

S. Laruelle (10h55-11h35) Stochastic Approximation with Markov Innovation Revisited

W. Niemi (11h35-12h15) Nonasymptotic bounds on the estimation error for regenerative MCMC

lunch (12h15-13h15)

## Monday, September 7, afternoon session

**Wolfgang Wagner**, invited talk (13h15-14h25) Random and deterministic fragmentation models.

S. Harase (14h25-15h05) Fast lattice reductions for F2-linear pseudorandom number generators

P. L'Ecuyer (15h05-15h45) Limiting distributions for randomly-shifted lattice rules

coffee break (15h45.-16h05.)

P. Whitlock, (16h05-16h45) Random packing of hyperspheres and Marsaglia's Parking Lot Test

I. Dimov (16h45.-17h25.) Efficient Monte Carlo Integration Algorithms for Sensitivity Analysis of environmental models

C. Lécot (17h25.-18h05.) Diffusion in a nonhomogeneous medium: quasi-random walk on a lattice

N. Frikha (18h05-18h45) Computing VaR and CVaR using Stochastic Approximation Algorithm and Adaptive Importance Sampling: the diffusion process setting

**Tuesday, September 8, morning session**

**Stefan Heinrich**, invited talk (8h50-10h00) Monte Carlo function approximation with application to PDEs

coffee break (10h00-10h30)

special session : Algorithms and Complexity for High Dimensional Problems.

Thomas Mueller-Gronbach (10h30-11h10) Multi-level Monte Carlo methods for infinite-dimensional quadrature on  $\mathbb{R}^N$

James Calvin (11h10-11h50)

Andreas Neuenkirch (11h50-12h30) Discretizing the fractional Lévy area: A Milstein-type scheme for SDEs driven by fractional Brownian motion

lunch (12h30-13h45)

**Tuesday, September 8, afternoon session**

**Henryk Wozniakowski**, invited talk (13h45-14h55) Tractability of multivariate problems in the randomized setting

special session : Algorithms and Complexity for High Dimensional Problems.

Daniel Rudolf (14h55-15h35) Explicit error bounds for Markov chain Monte Carlo methods

coffee break (15h35.-16h05.)

special session : Algorithms and Complexity for High Dimensional Problems.

Leszek Plaskota (16h05-16h45) Tractability with noise.

Thomas Daun (16h45-17h15) On the Randomized Solution of Initial Value Problems

Bernhard Milla (17h15.-17h45.) Optimal Stochastic Approximation of Indefinite Integrals, Part I

Stefan Heinrich (17h45-18h15) Optimal Stochastic Approximation of Indefinite Integrals, Part II

**Wednesday, September, 9 morning session**

P. Whitlock (8h50-9h30) Generalizing Sudoku to Three Dimensions

special session : Digital point sets.

W. Schmid (9h30-10h00) Digital point sets : Introduction

F. Pausinger (10h00-10h40) A good Permutation for one dimensional Diaphony

coffee break (10h40-11h10)

special session : Digital point sets.

H. Faure (11h10-11h50) Improved Halton sequences and discrepancy bounds

G. Pirsic (11h50-12h30) Extensible hyperplane nets

lunch

**Wednesday, September 9: afternoon free**

**Wednesday, September 9: conference dinner (19h00.-)**

**Thursday, September 10, morning session**

**Mike Giles**, invited talk (8h50-10h00) Numerical analysis of multilevel Monte Carlo path simulation.

coffee break (10h00.-10h30.)

special session. Multiscale stochastic simulation and applications.

Karl Sabelfeld (10h30-11h10) Random boundary value problems: stochastic models and simulation

N. Mozartova (11h10-11h50) Sparsified Randomization Algorithms for large systems of linear equations

A. Abourashchi (11h50-12h30) On exponential mixing bounds and convergence rate for Student processes

lunch (12h30-13h45)

**Thursday, September 10, morning session**

special session. Multiscale stochastic simulation and applications

V. Alexandrov (13h45-14h25) Advanced Monte Carlo Scalable Algorithms for Advanced Architectures

T. Averina (14h25-15h05) New model of a price series in the form of the solution to SDE with a Poisson component

B. Kargin (15h05-15h45) Weight Monte Carlo modeling of optical radiation transfer in randomly-inhomogeneous scattering media

coffee break (15h45-16h15)

special session. Multiscale stochastic simulation and applications.

P. Kramer (16h15-16h55) Parameterization of Turbulent Transport by Mesoscale Eddies

R. Makarov (16h55-17h35) Exact Simulation of Bessel Processes

G. Pavliotis (17h35-18h15) Estimating Lagrangian Diffusivities from Noisy Lagrangian Observations

**Friday, September, 11, morning session**

M. Shah (8h50.-9h30.) A Genetic Algorithm Approach to Estimate Lower Bounds for the Star Discrepancy

Hongmei Chi (9h30-10h10) Generating parallel Kronecker sequences via scrambling

coffee break (10h10.-10h30)

M. Zalewska (10h30.-11h10.) A comparative study of hot-deck imputation applied to medical data with missing values

S. Maire (11h10.-11h50.) Adaptive integration and approximation over hyperrectangular regions with applications to basket options pricing

H. Sak (11h50.-12h30.)

Increasing the Number of Inner Replications of Multifactor Portfolio Credit Risk Simulation in the t-Copula Model

**concluding remarks (12h30.-13h00.)**

lunch