Monday morning, August 16, 2010

8:45–9:00	Room 16 (Audytorium), **Opening**, Henryk Woźniakowski		
	Room 16 (Audytorium), **Plenary talk** Chair: Harald Niederreiter		
9:00–10:00	**On the Unreasonable Effectiveness of QMC** ***Ian H. Sloan (Australia)***		
10:00–10:30	Coffee break		
	Room 16 (Audytorium) **Special session I** *Monte Carlo Methods for Transport and Quadrature Problems.* *In Honor of Jerry Spanier's Eightieth Birthday, Part I* Organizers: Carole Hayakawa (USA), Fred J. Hickernell (USA)	Room 111/112 **Special session II** *Approximation Theory and Numerics for SDEs. Part I* Organizers: Stefan Geiss (Austria), Thomas Müller-Gronbach (Germany), Andreas Neuenkirch (Germany)	Room 115/116 **Technical session I** Chair: Alan Genz
10:30–11:00	Quasi-Monte Carlo progressive photon mapping *Alexander Keller (Germany)*	Sampling conditioned hypoelliptic diffusions *Jochen Voss (UK)*	Variants of Mersenne twister suitable for graphic processors *Makoto Matsumoto (Japan)*
11:00–11:30	Quasi-Monte Carlo methods for flow through a porous media *Frances Kuo (Australia)*	Deriving numerical methods for SDEs driven by fractional Brownian motions *Andreas Neuenkirch (Germany)*	Uniform pseudorandom number generator with guaranteed statistical independence of numbers on length up to logarithm of mesh size *Lev Barash (Russia)*
11:30–12:00	Randomly permuted and random-started Halton sequences *Giray Ökten (USA)*	Approximating a geometric fractional Brownian motion and related processes via discrete Wick calculus *Peter Parczewski (Germany)*	An efficient lattice reduction method for $\mathbf{F}_2$-linear pseudorandom number generator using the Mulders and Sorjohan algorithm *Shin Harase (Japan)*
12:00–12:30	Lattice methods for accelerating the convergence of estimates for quadrature and integral equations *Earl Maize (USA)*	On the global Lipschitz assumption in computational stochastics *Arnulf Jentzen (Germany)*	Universal fuzzy test for pseudorandom number generation (UFST-PRNG) *Raad A. Muhajjar (India)*

Next: **Afternoon sessions and welcome reception** ▷▷▷

Monday afternoon, August 16, 2010

12:30–14:00	Lunch		
	Room 16 (Audytorium), **Plenary talk** Chair: Klaus Ritter		
14:00–15:00	**Retrospective Sampling and the Bernoulli Factory** ***Gareth Roberts (UK)***		
	Room 16 (Audytorium) **Special session III** *Monte Carlo Methods for Transport and Quadrature Problems.* *In Honor of Jerry Spanier's Eightieth Birthday. Part II* Organizers: Carole Hayakawa (USA), Fred J. Hickernell (USA)	Room 111/112 **Special session IV** *Approximation Theory and Numerics for SDEs. Part II* Organizers: Stefan Geiss (Austria), Thomas Müller-Gronbach (Germany), Andreas Neuenkirch (Germany)	Room 115/116 **Technical session II** Chair: Ronald Cools
15:00–15:30	Vector Monte Carlo estimators: dual presentation and optimization *Ilya Medvedev (Russia)*	Multilevel Monte Carlo algorithms for Lévy-driven SDE's with Gaussian correction *Steffen Dereich (Germany)*	GPU-based quasi-Monte Carlo algorithms for some linear algebra problems *Aneta Karaivanova (Bulgaria)*
15:30–16:00	Spatial/angular contribution maps for improved adaptive Monte Carlo algorithms *Carole Hayakawa (USA)*	Multilevel path simulation for jump diffusion SDEs *Yuan Xia (UK)*	Circulant embeddings for Toeplitz covariance matrices *James Nichols (Australia)*
16:00–16:30	Exact particle flow for nonlinear filters *Fred Daum (USA)*	Discrete time hedging in the Lévy model *Christel Geiss (Austria)*	Monte Carlo methods for iterations with preconditioning *Anna Rukavishnikova (Russia)*
16:30–17:00	Run-time generation of QMC-Kalman filters for track fitting *Gabriel Esteves (Canada)*	On the optimal approximation of certain stochastic integrals *Heikki Seppälä (Finland)*	Approximate solution of large-scale linear inverse problems with Monte Carlo simulation *Nick Polydorides (Cyprus)*
17:00–17:30	Coffee break		
19:00	Welcome Reception in the nearby Kazimierzowski Palace		

Next: **Tuesday sessions** ▷▷▷

Tuesday morning, August 17, 2010

	Room 16 (Audytorium), **Plenary talk** Chair: Erich Novak
9:00–10:00	**Randomized Approximation of Functions with Application to Elliptic PDEs** ***Stefan Heinrich (Germany)***
10:00–10:30	Coffee break

	Room 16 (Audytorium) **Special session V** *Monte Carlo Methods and Functional Analysis.* *In Honor of Stefan Heinrich's Sixtieth Birthday. Part I* Organizers: Peter Mathé (Germany), Alexander Keller (Germany)	Room 111/112 **Special session VI** *MC and QMC in Finance. Part I* Organizers: Andrzej Palczewski (Poland), Łukasz Stettner (Poland)	Room 115/116 **Technical session III** Chair: Makoto Matsumoto
10:30–11:00	Small deviations of smooth Gaussian processes *Thomas Kühn (Germany)*	Multilevel path simulation for multidimensional SDEs *Mike B. Giles (UK)*	Statistical algorithm for estimating the derivatives of the solution to the elliptic BVP *Aleksandr Burmistrov (Russia)*
11:00–11:30	Strong tractability of function approximation using radial basis function methods *Fred J. Hickernell (USA)*	Jump-adapted discretization schemes for stochastic differential equations driven by Lévy processes *Peter Tankov (France)*	An improved time-source iteration Monte Carlo method for α eigenvalue calculation *Ruihong Wang (China)*
11:30–12:00	Importance sampling for the approximation of integrals *Aicke Hinrichs (Germany)*	Portfolio risk modeling with imprecise parameters *Tomas Tichý (Czech Republic)*	Value Monte Carlo algorithms for estimating the solution to the coagulation equation *Mariya Korotchenko (Russia)*
12:00–12:30	On the power of function values in different settings *Erich Novak (Germany)*	Handling the discontinuities in pricing and hedging by quasi-Monte Carlo methods *Xiaoqun Wang (China)*	Quasi-Monte Carlo methods in stochastic approximation *Sergei Smirnov (Russia)*

Next: **Afternoon sessions** ▷▷▷

Tuesday afternoon, August 17, 2010

12:30–14.00	Lunch		
	Room 16 (Audytorium), **Plenary talk** Chair: Fred J. Hickernell		
14:00–15:00	**Liberating the Dimension for Function Integration and Approximation** ***Grzegorz W. Wasilkowski (USA)***		
	Room 16 (Audytorium) **Special session VII** *Monte Carlo Methods and Functional Analysis.* *In Honor of Stefan Heinrich's Sixtieth Birthday. Part II* Organizers: Peter Mathé (Germany), Alexander Keller (Germany)	Room 111/112 **Special session VIII** *MC and QMC in Finance. Part II* Organizers: Andrzej Palczewski (Poland), Łukasz Stettner (Poland)	Room 115/116 **Technical session IV** Chair: Christian Lecot
15:00–15:30	Lower bounds for the complexity of linear functionals in the randomized setting *Henryk Woźniakowski (Poland, USA)*	Variance reduction for options pricing in multivariate jump-diffusion models *Anatoly Gormin (Russia)*	Irregularity in strong approximation and the multilevel Monte Carlo method *Rainer Avikainen (Finland)*
15:30–16:00	Liberating the dimension for weighted integration in the worst case and randomized settings *Grzegorz W. Wasilkowski (USA)*	Estimating joint default probability by efficient importance sampling with applications from bottom up *C.-H. Sean Han (Taiwan)*	Weighted Monte Carlo method applied to acceleration oriented traffic flow model *Aleksandr Burmistrov (Russia)*
16:00–16:30	A Randomized Algorithm for Indefinite Parametric Integration *Thomas Daun (Germany)*	Exact simulation methods for pricing occupation-time derivatives *Roman Makarov (Canada)*	Sequential Monte Carlo filter for state and adaptive parameter estimation with application in nonlinear GNSS trajectories *Hamza Alkhatib (Germany)*
16:30–17:00	Partitioning low discrepancy sequences *Alexander Keller (Germany)*	Stochastic mesh methods for quadratic hedging with transaction costs *Pierre-A. Tremblay (Canada)*	A Multilevel Monte Carlo Algorithm for Lévy driven SDEs *Felix Heidenreich (Germany*
17:00–17:30	Coffee break		

Next: **Evening sessions and a discussion** ▷▷▷

Tuesday evening, August 17, 2010

	Room 16 (Audytorium) **Technical session V** Chair: Xiaogun Wang	Room 111/112 **Technical session VI** Chair: Jan Baldeaux	Room 115/116 **Technical session VII** Chair: Aicke Hinrichs
17:30–18:00	Computing Greeks using multilevel path simulation *Sylvestre Burgos (UK)*	Variance reduction via region mapping: QMC variations for integration with one free node *Anton Antonov (Russia)*	Approximation with general information versus function evaluations *Ralph Tandetzky (Germany)*
18:00–18:30	Monte Carlo methods on sensitivities estimation of American options *Nan Chen (China, Hong Kong)*	A new method of variance reduction in Monte Carlo integration *Fatin Sezgin (Turkey)*	The optimality of Euler-type algorithms for approximation of stochastic differential equations with discontinuous coefficients *Paweł Przybyłowicz (Poland)*

18:35–19:00 Room 16, *Informal Discussion*: **Research in the 21st Century: How can we use the internet to our advantage?**
Josef Dick (Australia)

Next: **Wednesday sessions** ▷▷▷

Wednesday morning, August 18, 2010

	Room 16 (Audytorium), **Plenary talk** Chair: Jerome Spanier
9:00–10:00	**Upper Bounds in Discrepancy Theory** ***William Chen (Australia)***
10:00–10:10	Award Ceremony *Henryk Woźniakowski*
10:10–10:30	Coffee break

	Room 16 (Audytorium) **Special session IX** *Distribution of Sequences* Organizers: Oto Strauch (Slovakia), Shu Tezuka (Japan)	Room 111/112 **Special session X** *Tractability of Nonlinear Problems* Organizers: Arthur G. Werschulz (USA)	Room 115/116 **Technical session VIII** Chair: Peter Hellekalek
10:30–11:00	Distribution functions of ratio block sequences *Ladislav Mišík (Czech Republic)*	Coin tossing algorithms for integral equations and tractability *Erich Novak (Germany)*	QMC computation of confidence intervals for a sleep performance model *Alan Genz (USA)*
11:00–11:30	Some applications of distribution functions of sequences *Oto Strauch (Slovakia)*	A fast algorithm for approximating the ground state energy on a quantum computer *Anargyros Papageorgiou (USA)*	Application of quasi-Monte Carlo methods for evaluation of derivative based global sensitivity measures *Sergei Kucherenko (UK)*
11:30–12:00	On Hammersley and Zaremba point sets in two dimensions *Henri Faure (France)*	Tractability of the Fredholm problem of the second kind *Art Werschulz (USA)*	Shot noise series representation of infinitely divisible random vectors and Monte Carlo simulation *Reiichiro Kawai (UK)*
12:00–12:30	High-discrepancy sequences for high-dimensional numerical integration *Shu Tezuka (Japan)*	Randomized algorithms for Hamiltonian simulation *Chi Zhang (USA)*	Hardware support for algorithms associated with the Monte Carlo *Andrey Yakovenko (Russia)*

Next: **Afternoon session, excursion and conference dinner ▷▷▷**

Wednesday afternoon and evening, August 18, 2010

12:30–14:00	Lunch
	Room 16 (Audytorium), **Plenary talk** Chair: Thomas Müller-Gronbach
14:00–15:00	**Duality between Boundary Perturbations and Discrete Exit Times: Applications to Simulation Schemes** ***Emmanuel Gobet (France)***
15:00–15:30	Coffee break
15:15–17:15	**Excursion:** Visiting Warsaw
17:30–	**Conference Dinner** at the Porczyński Gallery (Warsaw, Plac Bankowy 1), see also www.muzeummalarstwa.pl. The venue of the next MCQMC in 2012 will be announced.

Next: **Thursday sessions** ▷▷▷

Thursday morning, August 19, 2010

	Room 16 (Audytorium), **Plenary talk** Chair: Art Owen		
9:00–10:00	**Randomized Quasi-Monte Carlo: Theory, Choice of Discrepancy, and Applications** ***Pierre L'Ecuyer (Canada)***		
10:00-10:30	Coffee break		
	Room 16 (Audytorium) **Special session XI** *QMC with Markov Chains* Organizers: Art B. Owen (USA)	Room 111/112 **Special session XII** *Approximation Theory and Numerics for SDEs. Part III* Organizers: Stefan Geiss (Austria), Thomas Müller-Gronbach (Germany), Andreas Neuenkirch (Germany)	Room 115/116 **Technical session IX** Chair: Thomas Kühn
10:30–11:00	Experiments with QMC in MCMC *Art Owen (USA)*	Discrete time approximation of BSDEs, Part I *Bruno Bouchard (France)*	An intermediate bound on the star discrepancy *Stephen Joe (New Zealand)*
11:00–11:30	Consistency of Markov chain quasi-Monte Carlo on continuous state spaces *Josef Dick (Australia)*	Discrete time approximation of BSDEs, Part II *Bruno Bouchard (France)*	Uniform distribution of sequences in terms of p-adic arithmetic *Peter Hellekalek (Austria)*
11:30–12:00	Explicit error bounds for Markov chain Monte Carlo methods *Daniel Rudolf (Germany)*	Approximation of stochastic integrals and weighted BMO *Stefan Geiss (Austria)*	An algorithm for the construction of weighted degree lattice rules *Dirk Nuyens (Belgium)*
12:00–12:30	Array-RQMC for Markov chains with random stopping times *Pierre L'Ecuyer (Canada)*	Fractional smoothness and approximation of stochastic integrals in L_p, $p > 2$ *Anni Toivola (Finland)*	A construction of polynomial lattice rules with small gain coefficients *Jan Baldeaux (Australia)*

Next: **Afternoon sessions** ▷▷▷

Thursday afternoon, August 19, 2010

12:30–14:00 Lunch

	Room 16 (Audytorium), **Plenary talk** Chair: Wolfgang Ch. Schmid		
14:00–15:00	**Polynomial Lattice Rules: Old and New Results** ***Friedrich Pillichshammer (Austria)***		
	Room 16 (Audytorium) **Special session XIII** *Point Sets and Sequences for QMC* Organizers: Harald Niederreiter (Austria), Friedrich Pillichshammer (Austria)	Room 111/112 **Special session XV** *Approximation Theory and Numerics for SDEs. Part IV* Organizers: Stefan Geiss (Austria), Thomas Müller-Gronbach (Germany), Andreas Neuenkirch (Germany)	Room 115/116 **Special session XIV** *Probabilistic MCMC. Part I* Organizers: Krzysztof Latuszynski (UK), Wojciech Niemiro (Poland)
15:00–15:30	A construction of digital nets in $\mathbb{R}^s$ *Josef Dick (Australia)*	Multi-level algorithms for infinite-dimensional integration on $\mathbb{R}^{\mathbb{N}}$ *Fred J. Hickernell (USA)*	On regenerative simulation in variable-at-a-time Markov Chain Monte Carlo *Galin L. Jones (USA)*
15:30–16:00	Extensions of Atanassov's methods for Halton sequences *Henri Faure (France)*	On quantization of marginal distributions of SDEs *Larisa Yaroslavtseva (Germany)*	Scaling analysis of multiple-try MCMC methods *Myléne Bédard (Canada)*
16:00–16:30	Fractional discrepancy *Michael Gnewuch (USA)*	Euler-type scheme based on free-knot spline approximation for SDEs *Mehdi Slassi (Germany)*	Sampling from ridge like measures *David A. White (UK)*
16:30–17:00	The discrepancy of hybrid sequences *Harald Niederreiter (Austria)*	Nonlinear approximation and Besov regularity of a class of random fields *Klaus Ritter (Germany)*	Nonparametric Bayesian drift estimation for discretely observed SDEs *Yvo Pokern (UK)*

17:00–17:30 Coffee break

Next: **Evening sessions** ▷▷▷

Thursday evening, August 19, 2010

	Room 16 (Audytorium) **Technical session X** Chair: Galin Jones	Room 111/112 **Technical session XI** Chair: Aneta Karaivanova	Room 115/116 **Technical session XII** Chair: Stephen Joe
17:30–18:00	Nonasymptotic bounds on the mean square error for MCMC estimates via renewal techniques *Wojciech Niemiro (Poland)*	Pointwise approximation of stochastic heat equations with additive noise *Daniel Henkel (Germany)*	Bounds on the variance of randomly shifted lattice rules *Vasile Sinescu (Belgium)*
18:00–18:30	Adaptive Gibbs samplers *Krzysztof Latuszynski (UK)*	Sequential Monte Carlo finite differences for the Poisson equation *Sylvain Maire (France)*	Chebyshev lattices as unifying framework for point sets used in interpolation and integration *Koen Poppe (Belgium)*
18:30–19:00	Quantile estimation via Markov chain Monte Carlo *James Flegal (USA)*	Enumerating certain quasi-Monte Carlo sequences in voxels *Alexander Keller (Germany)*	Interpolation lattices for hyperbolic cross trigonometric polynomials *Lutz Kämmerer (Germany)*

19:00 (Closed) **Meeting of the Steering Committee of MCQMC** (Room 308)

Next: **Friday sessions** ▷▷▷

Friday morning, August 20, 2010

	Room 16 (Audytorium), **Plenary talk** Chair: Henri Faure
9:00–10:00	**Entropy, Randomization, Derandomization, and Discrepancy** ***Michael Gnewuch (USA)***
10:00–10:30	Coffee break

	Room 16 (Audytorium) **Special session XVI** *Discrepancy Estimates* Organizers: Josef Dick (Australia), Michael Gnewuch (USA)	Room 111/112 **Special session XVII** *Probabilistic MCMC. Part II* Organizers: Krzysztof Latuszynski (UK), Wojciech Niemiro (Poland)	Room 115/116 **Technical session XIII** Chair: Dirk Nuyens
10:30–11:00	On some sets with minimal L^2 discrepancy *Dmitriy Bilyk (USA)*	On the ergodicity of adaptive MCMC algorithms *Eero Saksman (Finland)*	Numerical simulation of the drop size distribution in a spray *Christian Lecot (France)*
11:00–11:30	Recent progress concerning the diaphony of generalized van der Corput sequences in arbitrary base b *Florian Franz Pausinger (Austria)*	Convergence of adaptive MCMC algorithms: ergodicity and law of large numbers *Gersende Fort (France)*	Hoeffding's inequalities for Markov chains on general state space *Błażej Miasojedow (Poland)*
11:30–12:00	On the weighted star discrepancy of lattice rules *Vasile Sinescu (Belgium)*	Lower bounds on the mixing time of adaptive MCMC methods *Dawn B. Woodard (USA)*	The rate of convergence of sparse grid quadrature on products of spheres *Paul Leopardi (Australia)*
12:00–12:30	Complexity of computing the star discrepancy *Magnus Wahlström (Germany)*	Using TPA for Monte Carlo integration *Mark Huber (USA)*	On the stability of adaptive random walk Metropolis algorithms *Matti Vihola (Finland)*

Next: **Afternoon sessions** ▷▷▷

Friday afternoon, August 20, 2010

12:30–14:00	Lunch
	Room 16 (Audytorium), **Plenary talk** Chair: Frances Kuo
14:00–15:00	**Endpoint-conditioned Markov Process Simulation: Variance Reduction via Bisection** ***Søren Asmussen (Denmark)***
15:00	End of Conference and movie about the venue of MCQMC 2012