

Schedule

Mon, Jul 28	Session
08:00–17:30	Registration Desk Open (HH Lobby)
08:45–09:00	Opening Ceremony (HH Auditorium)
09:00–10:00	Plenary Talk by Rohan Sawhney, Nvidia Corporation, Monte Carlo Methods in Computer Graphics (HH Auditorium)
10:00–10:30	Coffee Break (HH Lobby)
10:30–12:30	Stochastic Computation and Complexity, Part I (HH Auditorium)
10:30–12:30	Domain Uncertainty Quantification (HH Ballroom)
10:30–12:30	Nested expectations: models and estimators, Part I (PH Auditorium)
10:30–12:30	Hardware or Software for (Quasi-)Monte Carlo Algorithms, Part I (WH Auditorium)
10:30–12:30	Technical Session - Markov Chain Monte Carlo (HH Alumni Lounge)
12:30–14:00	Lunch Break (MTCC Commons)
14:00–15:00	Plenary Talk by Christiane Lemieux, U of Waterloo, Golden ratio nets and sequences (HH Auditorium)
15:00–15:30	Coffee Break (HH Lobby)
15:30–17:30	Stochastic Computation and Complexity, Part II (HH Auditorium)
15:30–17:30	Recent advances in optimization under uncertainty (HH Ballroom)
15:30–17:30	Computational Methods for Low-discrepancy Sampling and Applications (PH Auditorium)
15:30–17:30	Technical Session - Quasi-Monte Carlo, Part 1 (WH Auditorium)
15:30–17:30	Technical Session - PDEs and SDEs (HH Alumni Lounge)
17:30–19:30	Welcome Reception (HH Lobby)
Tue, Jul 29	Session
08:30–17:30	Registration Desk Open (HH Lobby)
09:00–10:00	Plenary Talk by Peter Glynn, Stanford U, Combining Simulation and Linear Algebra: COSIMLA (HH Auditorium)
10:00–10:30	Coffee Break (HH Lobby)
10:30–12:30	Stochastic Computation and Complexity, Part III (HH Auditorium)
10:30–12:30	Next-generation optimal experimental design: theory, scalability, and real world impact: Part I (HH Ballroom)
10:30–12:30	Heavy-tailed Sampling (PH Auditorium)
10:30–12:30	Frontiers in (Quasi-)Monte Carlo and Markov Chain Monte Carlo Methods, Part I (WH Auditorium)
10:30–12:30	Technical Session - Bayesian Methods (HH Alumni Lounge)
12:30–14:00	Lunch Break (On your own)
14:00–15:00	Plenary Talk by Roshan Joseph, Georgia Institute of Technology, Sensitivity and Screening: From Monte Carlo to Experimental Design (HH Auditorium)
15:00–15:30	Coffee Break (HH Lobby)
15:30–17:30	Stochastic Computation and Complexity, Part IV (HH Auditorium)
15:30–17:30	Next-generation optimal experimental design: theory, scalability, and real world impact: Part II (HH Ballroom)
15:30–17:30	Advances in Rare Events Simulation (PH Auditorium)
15:30–17:30	Frontiers in (Quasi-)Monte Carlo and Markov Chain Monte Carlo Methods, Part II (WH Auditorium)
15:30–17:30	Technical Session - Quasi-Monte Carlo, Part 2 (HH Alumni Lounge)
18:00–20:00	Chicago White Sox vs. Philadelphia Phillies (must purchase tickets beforehand) (Meet in HH Lobby)

Wed, Jul 30	Session
08:30–16:30	Registration Desk Open (HH Lobby)
09:00–10:00	Plenary Talk by Michaela Szölgyenyi, U of Klagenfurt, An optimal transport approach to quantifying model uncertainty of SDEs (HH Auditorium)
10:00–10:30	Coffee Break (HH Lobby)
10:30–12:30	Stochastic Computation and Complexity, Part V (HH Auditorium)
10:30–12:30	Statistical Design of Experiments (HH Ballroom)
10:30–12:30	Advances in Adaptive Hamiltonian Monte Carlo (PH Auditorium)
10:30–12:30	Technical Session - Simulation (WH Auditorium)
10:30–12:30	Technical Session - Sampling (HH Alumni Lounge)
12:30–14:00	Lunch Break (On your own)
14:00–16:00	Stochastic Optimization (HH Auditorium)
14:00–16:00	Recent Progress on Algorithmic Discrepancy Theory and Applications (HH Ballroom)
14:00–16:00	Monte Carlo Applications in High-performance Computing, Computer Graphics, and Computational Science (PH Auditorium)
14:00–16:00	Technical Session - Statistics (WH Auditorium)
16:00–16:30	Coffee Break (HH Lobby)
18:00–20:30	Conference Banquet (Bridgeport Art Center, 1200 W 35th Street)

Thu, Jul 31	Session
08:30–17:30	Registration Desk Open (HH Lobby)
09:00–10:00	Plenary Talk by Uros Seljak, UC Berkeley, Gradient-Based MCMC Sampling: Methods and Optimization Strategies (HH Auditorium)
10:00–10:30	Coffee Break (HH Lobby)
10:30–12:30	QMC and Applications Part I (HH Auditorium)
10:30–12:30	Analysis of Langevin and Related Sampling Algorithms, Part I (HH Ballroom)
10:30–12:30	Nested expectations: models and estimators, Part II (PH Auditorium)
10:30–12:30	Technical Session - Finance (WH Auditorium)
10:30–12:30	Technical Session - ML & Optimization (HH Alumni Lounge)
12:30–14:00	Lunch Break (On your own)
14:00–15:00	Plenary Talk by Nicolas Chopin, Institut Polytechnique de Paris, Saddlepoint Monte Carlo and its application to exact ecological inference (HH Auditorium)
15:00–15:30	Coffee Break (HH Lobby)
15:30–17:30	QMC and Applications Part II (HH Auditorium)
15:30–17:30	Analysis of Langevin and Related Sampling Algorithms, Part II (HH Ballroom)
15:30–17:30	Recent Advances in Stochastic Gradient Descent (PH Auditorium)
15:30–17:30	Technical Session - Sampling (WH Auditorium)
15:30–17:30	Technical Session - SDEs (HH Alumni Lounge)
18:30–20:30	Steering Committee Meeting (by invitation) (Victory Tap, 1416 S Michigan Avenue)

Fri, Aug 1	Session
08:30–12:15	Registration Desk Open (HH Lobby)
09:00–11:00	Forward and Inverse Problems for Stochastic Reaction Networks (HH Auditorium)
09:00–11:00	Hardware or Software for (Quasi-)Monte Carlo Algorithms, Part II (HH Ballroom)
09:00–11:00	Technical Session - Simulation (PH Auditorium)
09:00–11:00	Technical Session - Sampling (WH Auditorium)
09:00–11:00	Technical Session - Markov Chain Monte Carlo (HH Alumni Lounge)
11:00–11:30	Coffee Break (HH Lobby)
11:30–12:30	Plenary Talk by Veronika Ročková, U of Chicago, AI-Powered Bayesian Inference (HH Auditorium)
12:30–12:40	Closing Ceremony (HH Auditorium)

Mon, Jul 28, 2025 – Morning					
08:00–17:30	Registration Desk Open, HH Lobby				
08:45–09:00	Opening Ceremony by Fred Hickernell, HH Auditorium				
09:00–10:00	Plenary Talk: <i>Rohan Sawhney, Nvidia Corporation, Monte Carlo Methods in Computer Graphics</i> , p. 38				
Chair: Michael Mascagni, HH Auditorium					
10:00–10:30	Coffee Break, HH Lobby				
	HH Auditorium Special Session Stochastic Computation and Complexity, Part I, p. 49 Chair: Stefan Heinrich	HH Ballroom Special Session Domain Uncertainty Quantification, p. 50 Chair: <i>André-Alexander Zepernick</i>	PH Auditorium Special Session Nested expectations: models and estimators, Part I, p. 51 Chair: Arved Bartuska	WH Auditorium Special Session Hardware or Software for (Quasi-)Monte Carlo Algorithms, Part I, p. 52 Chair: Sou-Cheng Choi	HH Alumni Lounge Technical Session Markov Chain Monte Carlo Chair: Philip Gagnon
10:30–11:00	<i>Andreas Neuenkirch</i> , A strong order 1.5 boundary-preserving discretization scheme for scalar SDEs defined in a domain, p. 87	<i>André-Alexander Zepernick</i> , Domain UQ for stationary and time-dependent PDEs using QMC, p. 90	<i>Abdul Lateef Haji Ali</i> , An Adaptive Sampling Algorithm for Level-set Approximation, p. 93	<i>Pieterjan Robbe</i> , Multilevel quasi-Monte Carlo without replications, p. 96	<i>Zhihao Wang</i> , Stereographic Multi-Try Metropolis Algorithms for Heavy-tailed Sampling, p. 175
11:00–11:30	<i>Christopher Rauhögger</i> , An adaptive Milstein-type method for strong approximation of systems of SDEs with a discontinuous drift coefficient, p. 88	<i>Carlos Jerez-Hanckes</i> , Domain Uncertainty Quantification for Electromagnetic Wave Scattering via First-Order Sparse Boundary Element Approximation, p. 91	<i>Vinh Hoang</i> , Posterior-Free A-Optimal Bayesian Design of Experiments via Conditional Expectation, p. 94	<i>Irina-Beatrice Haas</i> , A nested Multilevel Monte Carlo framework for efficient simulations on FPGAs, p. 96	<i>Ruben Seyer</i> , Creating rejection-free samplers by rebalancing skew-balanced jump processes, p. 176
11:30–12:00	<i>Verena Schwarz</i> , Strong order 1 adaptive approximation of jump-diffusion SDEs with discontinuous drift, p. 89	<i>Jürgen Dölz</i> , Quantifying uncertainty in spectral clusterings: expectations for perturbed and incomplete data, p. 92	<i>Vesa Kaarnioja</i> , QMC for Bayesian optimal experimental design with application to inverse problems governed by PDEs, p. 95	<i>Mike Giles</i> , CUDA implementation of MLMC on NVIDIA GPUs, p. 97	<i>Philippe Gagnon</i> , Theoretical guarantees for lifted samplers, p. 177
12:00–12:30	<i>Toni Karvonen</i> , Approximation in Hilbert spaces of the Gaussian and related analytic kernels, p. 89	<i>Harri Hakula</i> , Model Problems for PDEs on Uncertain Domains, p. 93		<i>Chung Ming Loi</i> , Scalable and User-friendly QMC Sampling with UMBridge, p. 98	

Mon, Jul 28, 2025 – Afternoon

12:30–14:00	Lunch Break, MTCC Commons				
14:00–15:00	Plenary Talk: <i>Christiane Lemieux, U of Waterloo, Golden ratio nets and sequences</i> , p. 39 Chair: <i>Nathan Kirk</i> , HH Auditorium				
15:00–15:30	Coffee Break, HH Lobby				
	HH Auditorium Special Session Stochastic Computation and Complexity, Part II, p. 54 Chair: <i>Larisa Yaroslavtseva</i>	HH Ballroom Special Session Recent advances in optimization under uncertainty, p. 55 Chair: <i>Phillip A. Guth</i>	PH Auditorium Special Session Computational Methods for Low-discrepancy Sampling and Applications, p. 56 Chair: <i>Nathan Kirk</i>	WH Auditorium Technical Session Quasi-Monte Carlo, Part 1 Chair: <i>Peter Kritzer</i>	HH Alumni Lounge Technical Session PDEs and SDEs Chair: <i>Håkon Hoel</i>
15:30–16:00	<i>Michael Gnewuch</i> , Optimality of deterministic and randomized QMC-cubatures on several scales of function spaces, p. 99	<i>Tapio Helin</i> , Stability of Expected Utility in Bayesian Optimal Experimental Design, p. 102	<i>François Clément</i> , Searching Permutations for Constructing Low-Discrepancy Point Sets and Investigating the Kritzinger Sequence, p. 105	<i>Christian Weiss</i> , Halton Sequences, Scrambling and the Inverse Star-Discrepancy, p. 186	<i>Leon Wilkosz</i> , Forward Propagation of Low Discrepancy Through McKean–Vlasov Dynamics: From QMC to MLQMC, p. 211
16:00–16:30	<i>Kateryna Pozharska</i> , Optimal designs for function discretization and construction of tight frames, p. 100	<i>Karina Koval</i> , Subspace accelerated measure transport methods for fast and scalable sequential experimental design, p. 103	<i>Nathan Kirk</i> , Minimizing the Stein Discrepancy, p. 106	<i>Sifan Liu</i> , Transport Quasi-Monte Carlo, p. 187	<i>Miguel Alvarez</i> , A New Approach for Unbiased Estimation of Parameters of Partially Observed Diffusions, p. 212
16:30–17:00	<i>Leszek Plaskota</i> , Complexity of approximating piecewise smooth functions in the presence of deterministic or random noise, p. 101	<i>Johannes Milz</i> , Randomized quasi-Monte Carlo methods for risk-averse stochastic optimization, p. 104	<i>Makram Chahine</i> , Improving Efficiency of Sampling-based Motion Planning via Message-Passing Monte Carlo, p. 107	<i>Ambrose Emmett-Iwaniw</i> , Using Normalizing Flows for Efficient Quasi-Random Sampling for Copulas, p. 187	<i>Håkon Hoel</i> , High-order adaptive methods for exit times of diffusion processes and reflected diffusions, p. 212
17:00–17:30	<i>Larysa Matiukha</i> , The Quality of Lattice Sequences, p. 101	<i>Arved Bartuska</i> , Efficient expected information gain estimators based on the randomized quasi-Monte Carlo method, p. 105	<i>Gregory Seljak</i> , An Empirical Evaluation of Robust Estimators for RQMC, p. 108	<i>Claude Hall</i> , Optimization of Kronecker Sequences, p. 188	<i>Thomas Cass</i> , Generative Modelling of Levy Area for High-Order SDE Simulation, p. 213
17:30–19:30	Welcome Reception, HH Lobby				

Tue, Jul 29, 2025 – Morning

08:30–17:30	Registration Desk Open, HH Lobby				
09:00–10:00	Plenary Talk: <i>Peter Glynn, Stanford U, Combining Simulation and Linear Algebra: COSIMLA</i> , p. 40 Chair: <i>Chang-Han Rhee</i> , HH Auditorium				
10:00–10:30	Coffee Break, HH Lobby				
	HH Auditorium Special Session Stochastic Computation and Complexity, Part III, p. 58 Chair: <i>Leszek Plaskota</i>	HH Ballroom Special Session Next-generation optimal experimental design: theory, scalability, and real world impact: Part I, p. 59 Chair: <i>Alen Alexanderian</i>	PH Auditorium Special Session Heavy-tailed Sampling, p. 61 Chair: <i>Sebastiano Grazzi</i>	WH Auditorium Special Session Frontiers in (Quasi-)Monte Carlo and Markov Chain Monte Carlo Methods, Part I, p. 63 Chair: <i>Sou-Cheng Choi</i>	HH Alumni Lounge Technical Session Bayesian Methods Chair: <i>Hamza Ruzayqat</i>
10:30–11:00	<i>Jean-François Chassagneux</i> , Computing the stationary measure of McKean-Vlasov SDEs, p. 109	<i>Xun Huan</i> , Optimal Pilot Sampling for Multi-fidelity Monte Carlo Methods, p. 111	<i>Sebastiano Grazzi</i> , Parallel computations for Metropolis Markov chains based on Picard maps, p. 114	<i>Jonathan Weare</i> , Functional estimation of the marginal likelihood, p. 117	<i>Lorenzo Nagar</i> , Optimizing Generalized Hamiltonian Monte Carlo for Bayesian Inference applications, p. 178
11:00–11:30	<i>Noufel Frikha</i> , On the convergence of the Euler-Maruyama scheme for McKean-Vlasov SDEs, p. 110	<i>Adrien Corenflos</i> , A recursive Monte Carlo approach to optimal Bayesian experimental design, p. 112	<i>Federica Milinanni</i> , A large deviation principle for Metropolis-Hastings sampling, p. 115	<i>Nikhil Bansal</i> , Randomized QMC Methods via Combinatorial Discrepancy, p. 118	<i>Hamza Ruzayqat</i> , Bayesian Anomaly Detection in Variable-Order and Variable-Diffusivity Fractional Mediums, p. 180
11:30–12:00	<i>Sotirios Sabanis</i> , Wasserstein Convergence of Score-based Generative Models under Semiconvexity and Discontinuous Gradients, p. 110	<i>Ayoub Belhadji</i> , Weighted quantization using MMD: From mean field to mean shift via gradient flows, p. 113	<i>Xingyu Wang</i> , Sharp Characterization and Control of Global Dynamics of SGDs with Heavy Tails, p. 116	<i>Michael Mascagni</i> , The Walk on Spheres Monte Carlo Algorithm for Solving Partial Differential Equations, p. 119	<i>Arghya Datta</i> , Theoretical Guarantees of Mean Field Variational Inference for Bayesian Principal Component Analysis, p. 181
12:00–12:30				<i>Hwanwoo Kim</i> , Enhancing Gaussian Process Surrogates for Optimization and Posterior Approximation via Random Exploration, p. 120	<i>Jimmy Lederman</i> , Bayesian Analysis of Latent Underdispersion Using Discrete Order Statistics, p. 182

Tue, Jul 29, 2025 – Afternoon

12:30–14:00	Lunch Break, On your own				
14:00–15:00	Plenary Talk: <i>Roshan Joseph, Georgia Institute of Technology, Sensitivity and Screening: From Monte Carlo to Experimental Design</i> , p. 41 Chair: <i>Simon Mak</i> , HH Auditorium				
15:00–15:30	Coffee Break, HH Lobby				
	HH Auditorium Special Session Stochastic Computation and Complexity, Part IV, p. 64 Chair: <i>Thomas Müller-Gronbach</i>	HH Ballroom Special Session Next-generation optimal experimental design: theory, scalability, and real world impact: Part II, p. 65 Chair: <i>Xun Huan</i>	PH Auditorium Special Session Advances in Rare Events Simulation, p. 67 Chair: <i>Shyam Mohan Subbiah Pillai</i>	WH Auditorium Special Session Frontiers in (Quasi-)Monte Carlo and Markov Chain Monte Carlo Methods, Part II, p. 69 Chair: <i>Sou-Cheng Choi</i>	HH Alumni Lounge Technical Session Quasi-Monte Carlo, Part 2 Chair: <i>Christian Weiss</i>
15:30–16:00	<i>Larisa Yaroslavtseva</i> , Optimal strong approximation of SDEs with Hölder continuous drift coefficient, p. 120	<i>Alen Alexanderian</i> , Goal-Oriented Sensor Placement for Infinite-Dimensional Bayesian Inverse Problems, p. 123	<i>Victor Elvira</i> , Multiple Importance Sampling for Rare Event Simulation in Communication Systems, p. 126	<i>Takashi Goda</i> , Quasi-uniform quasi-Monte Carlo digital nets, p. 129	<i>Peter Kritzer</i> , Approximation using median lattice algorithms, p. 189
16:00–16:30	<i>Gunther Leobacher</i> , Tractability of L_2 -approximation and integration in weighted Hermite spaces of finite smoothness, p. 121	<i>jacopo iollo</i> , Diffusion-Based Bayesian Experimental Design: Advancing BED for Practical Applications, p. 124	<i>Bruno Tuffin</i> , Asymptotic robustness of smooth functions of rare-event estimators, p. 126	<i>Ziang Niu</i> , Boosting the inference for generative models by (Quasi-)Monte Carlo resampling, p. 129	<i>Yang Liu</i> , Convergence Rates of Randomized Quasi-Monte Carlo Methods under Various Regularity Conditions, p. 190
16:30–17:00	<i>Alexander Steinicke</i> , Malliavin differentiation of Lipschitz SDEs and BSDEs and an Application to Quadratic Forward-Backward SDEs, p. 122	<i>Tommie Catanach</i> , Robust Bayesian Optimal Experimental Design under Model Misspecification, p. 125	<i>Eya Ben Amar</i> , Importance Sampling Methods with Stochastic Differential Equations for the Estimation of the Right Tail of the CCDF of the Fade Duration, p. 127	<i>Chenyang Zhong</i> , A hit-and-run approach for sampling and analyzing ranking models, p. 130	<i>Jakob Dilen</i> , Use of rank-1 lattices in the Fourier neural operator, p. 191
17:00–17:30	<i>Fred J. Hickernell</i> , A Unified Treatment of Tractability for Approximation Problems Defined on Hilbert Spaces, p. 122		<i>Shyam Mohan Subbiah Pillai</i> , Estimating rare event probabilities associated with McKean–Vlasov SDEs, p. 128	<i>Raghuram Pasupathy</i> , Interior-Point Frank-Wolfe (IPFW) for Linearly Constrained Functional Optimization Over Probability Spaces, p. 131	<i>Audit Jain</i> , Investigating the Optimum RQMC Batch Size for Betting and Empirical Bernstein Confidence Intervals, p. 191
18:00–20:00	Chicago White Sox vs. Philadelphia Phillies (must purchase tickets beforehand), Meet in HH Lobby				

Wed, Jul 30, 2025 – Morning

08:30–16:30	Registration Desk Open, HH Lobby				
09:00–10:00	Plenary Talk: <i>Michaela Szölgyenyi, U of Klagenfurt, An optimal transport approach to quantifying model uncertainty of SDEs</i> , p. 42 Chair: <i>Gunther Leobacher</i> , HH Auditorium				
10:00–10:30	Coffee Break, HH Lobby				
	HH Auditorium Special Session Stochastic Computation and Complexity, Part V, p. 70 Chair: <i>Andreas Neuenkirch</i>	HH Ballroom Special Session Statistical Design of Experiments, p. 71 Chair: <i>Simon Mak</i>	PH Auditorium Special Session Advances in Adaptive Hamiltonian Monte Carlo, p. 72 Chair: <i>Art Owen</i>	WH Auditorium Technical Session Simulation Chair: <i>Toon Ingelaere</i>	HH Alumni Lounge Technical Session Sampling Chair: <i>Nicola Branchini</i>
10:30–11:00	<i>Stefan Heinrich</i> , On the quantum complexity of parametric integration in Sobolev spaces, p. 132	<i>Simon Mak</i> , Respecting the boundaries: Space-filling designs for surrogate modeling with boundary information, p. 134	<i>Bob Carpenter</i> , GIST: Gibbs self-tuning for locally adapting Hamiltonian Monte Carlo, p. 138	<i>Philippe Blondeel</i> , Combining quasi-Monte Carlo with Stochastic Optimal Control for Trajectory Optimization of Autonomous Vehicles in Mine Counter Measure Simulations, p. 221	<i>Akash Sharma</i> , Sampling with constraints, p. 192
11:00–11:30	<i>Bernd Käfemodel</i> , Quantum Integration in Tensor Product Besov Spaces, p. 133	<i>Andrews Boahen</i> , Active Learning for Nonlinear Calibration, p. 135	<i>Nawaf Bou-Rabee</i> , Acceleration of the No-U-Turn Sampler, p. 139	<i>Rino Persiani</i> , A Monte Carlo Approach to Designing a Novel Sample Holder for Enhanced UV-Vis Spectroscopy, p. 222	<i>Joonha Park</i> , Sampling from high-dimensional, multimodal distributions using automatically tuned, tempered Hamiltonian Monte Carlo, p. 193
11:30–12:00	<i>Nikolaos Makras</i> , Taming the Interacting Particle Langevin Algorithm – The Superlinear Case, p. 133	<i>Qian Xiao</i> , Optimal design of experiments with quantitative-sequence factors, p. 136	<i>Chirag Modi</i> , ATLAS: Adapting Trajectory Lengths and Step-Size for Hamiltonian Monte Carlo, p. 140	<i>Prasanth Shyamsundar</i> , ARCANE Reweighting: A technique to tackle the sign problem in the simulation of collider events in high-energy physics, p. 223	<i>Arne Bouillon</i> , Localized consensus-based sampling for non-Gaussian distributions, p. 194
12:00–12:30	<i>Iosif Lytras</i> , Sampling with Langevin Dynamics from non-smooth and non-logconcave potentials., p. 134	<i>Chaofan Huang</i> , Factor Importance Ranking and Selection using Total Indices, p. 137	<i>Trevor Campbell</i> , AutoStep: Locally adaptive involutive MCMC, p. 141	<i>Nicole Aretz</i> , Multifidelity and Surrogate Modeling Approaches for Uncertainty Quantification in Ice Sheet Simulations, p. 224	<i>Alex Shkolnik</i> , Importance Sampling for Hawkes Processes, p. 195

Wed, Jul 30, 2025 – Afternoon

12:30–14:00	Lunch Break, On your own	HH Auditorium Special Session Stochastic Optimization, p. 74 Chair: <i>Shane Henderson</i>	HH Ballroom Special Session Recent Progress on Algorithmic Discrepancy Theory and Applications, p. 75 Chair: <i>Haotian Jiang</i>	PH Auditorium Special Session Monte Carlo Applications in High-performance Computing, Computer Graphics, and Computational Science, p. 76 Chair: <i>Michael Mascagni</i>	WH Auditorium Technical Session Statistics Chair: <i>Yiming Xu</i>	
14:00–14:30	<i>Raghuram Bollapragada</i> , Monte Carlo Based Adaptive Sampling Approaches for Stochastic Optimization, p. 142	<i>Haotian Jiang</i> , Algorithmic Discrepancy Theory: An Overview, p. 144	<i>Arash Fahim</i> , Gaining efficiency in Monte Carlo policy gradient methods for stochastic optimal control, p. 147	<i>Kazeem Adeleke</i> , Empirical Statistical Comparative Analysis of SNP Heritability Estimators and Gradient Boosting Machines (GBM) Using Genetic Data from the UK Biobank, p. 225		
14:30–15:00	<i>Shane Henderson</i> , A New Convergence Analysis of Two Stochastic Frank-Wolfe Algorithms, p. 143	<i>Peng Zhang</i> , Improving the Design of Randomized Experiments via Discrepancy Theory, p. 145	<i>Sharanya Jayaraman</i> , Examining the Fault Tolerance of High-Performance Monte Carlo Applications through Simulation, p. 148	<i>Carles Domingo-Enrich</i> , Cheap permutation testing, p. 226		
15:00–15:30	<i>Akshita Gupta</i> , Stochastic Gradient with Testing Functionals, p. 144	<i>Aleksandar Nikolov</i> , Online Factorization for Online Discrepancy Minimization, p. 146	<i>Rohan Sawhney</i> , Building Monte Carlo “Renderers” for Physics, p. 149	<i>Christopher Draper</i> , Moving PCG beyond LCGs, p. 227		
15:30–16:00			<i>Silei Song</i> , WoS-NN: Collaborating Walk-on-Spheres with Machine Learning to Solve Elliptic PDEs, p. 150	<i>Yiming Xu</i> , Hybrid least squares for learning functions from highly noisy data, p. 227		
16:00–16:30	Coffee Break, HH Lobby					
18:00–20:30	Conference Banquet, Bridgeport Art Center, 1200 W 35th Street					

Thu, Jul 31, 2025 – Morning

08:30–17:30	Registration Desk Open, HH Lobby				
09:00–10:00	Plenary Talk: <i>Uros Seljak, UC Berkeley, Gradient-Based MCMC Sampling: Methods and Optimization Strategies</i> , p. 43 Chair: <i>Tim Hobbs</i> , HH Auditorium				
10:00–10:30	Coffee Break, HH Lobby				
	HH Auditorium Special Session QMC and Applications Part I , p. 77 Chair: <i>Michael Gnewuch</i>	HH Ballroom Special Session Analysis of Langevin and Related Sampling Algorithms, Part I , p. 78 Chair: <i>Xiaou Cheng</i>	PH Auditorium Special Session Nested expectations: models and estimators, Part II , p. 79 Chair: <i>Abdul-Lateef Haji-Ali</i>	WH Auditorium Technical Session Finance Chair: <i>TBD</i>	HH Alumni Lounge Technical Session ML & Optimization Chair: <i>Frédéric Blondeel</i>
10:30–11:00	<i>Felix Bartel</i> , Exact discretization, tight frames and recovery via D-optimal designs, p. 151	<i>Krishnakumar Balasubramanian</i> , Finite-Particle Convergence Rates for Stein Variational Gradient Descent, p. 154	<i>Matteo Raviola</i> , Stochastic gradient with least-squares control variates, p. 157	<i>Abdujabar Rasulov</i> , Monte Carlo method for the Spatially Homogenous Boltzmann equation, p. 199	<i>Frédéric Blondeel</i> , Learning cooling strategies in simulated annealing through binary interactions, p. 214
11:00–11:30	<i>Mou Cai</i> , L2-approximation: using randomized lattice algorithms and QMC hyperinterpolation, p. 152	<i>Lihan Wang</i> , Convergence rates of kinetic Langevin dynamics with weakly confining potentials, p. 155	<i>Philipp Guth</i> , A one-shot method for Bayesian optimal experimental design, p. 157	<i>Matyokub Bakoev</i> , The Stochastic Differential Equations of the Heston Model for Option Pricing, p. 200	<i>Du Ouyang</i> , Accuracy of Discretely Sampled Stochastic Policies in Continuous-Time Reinforcement Learning, p. 215
11:30–12:00	<i>Zhijian He</i> , High-dimensional density estimation on unbounded domain, p. 153	<i>Xiaou Cheng</i> , Delocalization of Bias in Unadjusted Hamiltonian Monte Carlo, p. 156	<i>Sara Pérez-Vieites</i> , Langevin-based strategies for nested particle filters, p. 158	<i>Vincent Zhang</i> , Characterizing Efficacy of Geometric Brownian Motion Expectation-based Simulations on Low-Volatility American Common Stocks, p. 201	<i>Wei Cai</i> , Martingale deep neural networks for quasi-linear PDEs and stochastic optimal controls in 10,000 dimensions, p. 216
12:00–12:30	<i>Frances Y. Kuo</i> , Application of QMC to Oncology, p. 153			<i>Hao Quan</i> , Efficient Pricing for Variable Annuity via Simulation, p. 203	<i>Yiqing Zhou</i> , Minimizing Functions with Sparse Samples: A Fast Interpolation Approach, p. 216

Thu, Jul 31, 2025 – Afternoon						
12:30–14:00	Lunch Break, On your own					
14:00–15:00	Plenary Talk: <i>Nicolas Chopin, Institut Polytechnique de Paris, Saddlepoint Monte Carlo and its application to exact ecological inference</i> , p. 45 Chair: <i>Bruno Tuffin</i> , HH Auditorium					
15:00–15:30	Coffee Break, HH Lobby	HH Auditorium Special Session QMC and Applications Part II , p. 80 Chair: <i>Takashi Goda</i>	HH Ballroom Special Session Analysis of Langevin and Related Sampling Algorithms, Part II , p. 81 Chair: <i>Yifan Chen</i>	PH Auditorium Special Session Recent Advances in Stochastic Gradient Descent , p. 82 Chair: <i>Jing Dong</i>	WH Auditorium Technical Session Sampling Chair: <i>Joonha Park</i>	HH Alumni Lounge Technical Session SDEs Chair: <i>Fabio Zoccolan</i>
15:30–16:00	<i>Dirk Nuyens</i> , Approximation of multivariate periodic functions, p. 159	<i>Molei Tao</i> , Langevin-Based Sampling under Nonconvex Constraints, p. 161	<i>Jose Blanchet</i> , Inference for Stochastic Gradient Descent with Infinite Variance, p. 164	<i>Sascha Holl</i> , Concatenation of Markov processes for Monte Carlo Integration, p. 195	<i>Fabio Zoccolan</i> , Dynamical Low-Rank Approximation for SDEs: an interacting particle-system ROM, p. 208	
16:00–16:30	<i>Art Owen</i> , Randomized QMC with one categorical variable, p. 159	<i>Yifan Chen</i> , Convergence of Unadjusted Langevin in High Dimensions: Delocalization of Bias, p. 162	<i>Chang-Han Rhee</i> , Exit-Time Analysis of Stochastic Gradient Descent via Kesten's Recursion, p. 165	<i>Josephine Westermann</i> , Polynomial approximation for efficient transport-based sampling, p. 197	<i>Adrien Richou</i> , A probabilistic Numerical method for semi-linear elliptic Partial Differential Equations, p. 209	
16:30–17:00	<i>Zexin Pan</i> , QMC confidence intervals using quantiles of randomized nets, p. 160	<i>Fuzhong Zhou</i> , Entropy methods for the delocalization of bias in Langevin Monte Carlo, p. 163	<i>Jing Dong</i> , Stochastic Gradient Descent with Adaptive Data, p. 165	<i>Soumyadip Ghosh</i> , Fast Approximate Matrix Inversion via MCMC for Linear System Solvers, p. 197	<i>Anke Wiese</i> , A Chen-Fliess series for stochastic differential equations driven by Lévy processes, p. 209	
17:00–17:30	<i>Kosuke Suzuki</i> , Quasi-uniform quasi-Monte Carlo lattice point sets, p. 161	<i>Siddharth Mitra</i> , Convergence of Φ -Divergence and Φ -Mutual Information Along Langevin Markov Chains, p. 163			<i>Riccardo Saporiti</i> , Comparing Probabilistic Load Forecasters: Stochastic Differential Equations and Deep Learning, p. 210	
18:30–20:30	Steering Committee Meeting (by invitation), Victory Tap, 1416 S Michigan Avenue					

Fri, Aug 1, 2025					
08:30–12:15	Registration Desk Open, HH Lobby				
	HH Auditorium Special Session Forward and Inverse Problems for Stochastic Reaction Networks, p. 83 Chair: Sophia Münker	HH Ballroom Special Session Hardware or Software for (Quasi-)Monte Carlo Algorithms, Part II, p. 84 Chair: Sou-Cheng Choi	PH Auditorium Technical Session Simulation Chair: Nicole Aretz	WH Auditorium Technical Session Sampling Chair: Soumyadip Ghosh	HH Alumni Lounge Technical Session Markov Chain Monte Carlo Chair: TBD
09:00–09:30	Zhou Fang, Fixed-budget simulation method for growing cell populations, p. 166	Niklas Baumgarten, A High-performance Multi-level Monte Carlo Software for Full Field Estimates and Applications in Optimal Control, p. 170	Yashveer Kumar, Monte Carlo simulation approach to solve distributed order fractional mathematical model, p. 183	Nicola Branchini, Revisiting self-normalized importance sampling: new methods and diagnostics, p. 204	Reuben Cohn-Gordon, Gradient-based MCMC in high dimensions, p. 217
09:30–10:00	Sophia Münker, Dimensionality Reduction for Efficient Rare Event Estimation, p. 167	Aleksei Sorokin, Fast Gaussian Processes, p. 171	Serena Fattori, Benchmarking the Geant4-DNA 'UHDR' Example for Monte Carlo Simulation of pH Effects on Radiolytic Species Yields Using a Mesoscopic Approach, p. 184	Daniel Yukimura, Quantitative results on sampling from quasi-stationary distributions, p. 205	Philip Schaer, Parallel Affine Transformation Tuning: Drastically Improving the Effectiveness of Slice Sampling, p. 218
10:00–10:30	Maksim Chupin, Filtered Markovian Projection: Dimensionality Reduction in Filtering for Stochastic Reaction Networks, p. 168	Johannes Krotz, Hybrid Monte Carlo methods for kinetic transport, p. 172	Muhammad Noor ul Amin, Adaptive Max-EWMA Control Chart with SVR: Monte Carlo Simulation for Run Length Analysis, p. 185	Toon Ingelaere, Multilevel simulation of ensemble Kalman methods: interactions across levels, p. 206	Annabelle Carrell, Low-Rank Thinning, p. 219
10:30–11:00	Muruhan Rathinam, State and parameter inference in stochastic reaction networks, p. 169	Joseph Farmer, Flow-Based Monte Carlo Transport Simulation, p. 173	Chi-Ok Hwang, First-passage-based Last-passage Algorithm for Charge Density on a Conducting Surface, p. 185	Amit Subrahmanyam, Serial ensemble filtering with marginal coupling, p. 207	Hongmei Chi, Randomness in the quantum age: A Comparative Study of Classical and Quantum Random Number Generators, p. 219
11:00–11:30	Coffee Break, HH Lobby				
11:30–12:30	Plenary Talk: Veronika Ročková, U of Chicago, AI-Powered Bayesian Inference, p. 47 Chair: Art Owen, HH Auditorium				
12:30–12:40	Closing Ceremony by Fred Hickernell, HH Auditorium				