| Mon, Jul 28 | Session |
|-------------|--|
| 08:00-17:30 | Registration Desk Open (HH Lobby) |
| 08:45-09:00 | Conference Opening (HH Auditorium) |
| 09:00-10:00 | Plenary Talk by Rohan Sawhney (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 1 - Markov Chain Monte Carlo (HH Alumni Lounge) |
| 12:30-14:00 | Lunch Break |
| 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 Audi- |
| | torium) |
| 15:30-17:30 | Technical Session 4 - Quasi-Monte Carlo, Part 1 (WH Auditorium) |
| 15:30-17:30 | Technical Session 12 - PDEs (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 im- |
| | pact: 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 2 - Bayesian Methods (HH Alumni Lounge) |
| 12:30-14:00 | Lunch Break |
| 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 im- |
| | pact: 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 5 - Quasi-Monte Carlo, Part 2 (HH Alumni Lounge) |

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| $\mathrm{Wed},\mathrm{Jul}30$ | 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 15 - Simulation (WH Auditorium) |
| 10:30-12:30 | Technical Session 6 - Sampling (HH Alumni Lounge) |
| 12:30-14:00 | Lunch Break |
| 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 16 - Statistics (WH Auditorium) |
| 14:00-16:00 | Technical Session 10 - Langevin (HH Alumni Lounge) |
| 16:00-16:30 | Coffee Break (HH Lobby) |
| 18:00-20:30 | Conference Dinner (Bridgeport Arts Center) |

| 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: Meth- |
| | ods 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 8 - Finance (WH Auditorium) |
| 10:30-12:30 | Technical Session 13 - ML & Optimization (HH Alumni Lounge) |
| 12:30-14:00 | Lunch Break |
| 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 7 - Sampling (WH Auditorium) |
| 15:30-17:30 | Technical Session 11 - SDEs (HH Alumni Lounge) |
| 18:00-20:30 | Steering Committee Meeting (by invitation) |

| Fri, Aug 1 | Session |
|-------------|--|
| 08:30-12:15 | Registration Desk Open (HH Lobby) |
| 09:00-10:30 | Forward and Inverse Problems for Stochastic Reaction Networks (HH Auditorium) |
| 09:00-10:30 | Hardware or Software for (Quasi-)Monte Carlo Algorithms, Part II (HH Ballroom) |
| 09:00-10:30 | Technical Session 3 - Simulation (PH Auditorium) |
| 09:00-10:30 | Technical Session 9 - Sampling (WH Auditorium) |
| 09:00-10:30 | Technical Session 14 - Markov Chain Monte Carlo (HH Alumni Lounge) |
| 10:30-11 | Coffee Break (HH Lobby) |
| 11:00-12:00 | Plenary Talk by Veronika Ročková, U of Chicago, AI-Powered Bayesian Inference |
| | (HH Auditorium) |
| 12:00-12:15 | Closing Remarks (HH Auditorium) |

 $\overline{07/06/2025\ 13:40}$

$Mon,\,Jul\,\,\mathbf{28},\,\mathbf{2025}-\mathbf{Morning}$

| 08:00-17:30 | Registration Desk Open, HH Lobby | | | | | | |
|--------------|--|----------------------------|-----------------------------------|-----------------------------|----------------------------|--|--|
| 08:45-09:00 | Conference Opening by Fred Hickernell, HH Auditorium | | | | | | |
| 9:00 - 10:00 | Plenary Talk: Rohan Sawhney, p. ?? Chair: | | | | | | |
| 10:00-10:30 | Coffee Break, HH Lobby | | | | | | |
| | HH Auditorium | HH Ballroom | PH Auditorium | WH Auditorium | HH Alumni Lounge | | |
| | Special Session | Special Session Domain | Special Session Nested | Special Session | Technical Session 1 - | | |
| | Stochastic Computation | Uncertainty Quantification | expectations: models and | Hardware or Software for | Markov Chain Monte | | |
| | and Complexity, Part I | p. 31 | estimators, Part Į p. 32 | (Quasi-)Monte Carlo | Carlo | | |
| | p. 30 | Chair: TBD | Chair: TBD | Algorithms, Part I p. 33 | Chair: TBD | | |
| | Chair: TBD | | | Chair: TBD | | | |
| 10:30-11:00 | Andreas Neuenkirch, A | $Andr\'e-Alexander$ | Abdul Lateef Haji Ali, An | Pieterjan Robbe, | $Zhihao\ Wang,$ | | |
| | strong order 1.5 boundary | Zepernick, Domain UQ | Adaptive Sampling | Multilevel quasi-Monte | Stereographic Multi-Try | | |
| | preserving discretization | for stationary and | Algorithm for Level-set | Carlo without replications, | Metropolis Algorithms for | | |
| | scheme for scalar SDEs | time-dependent PDEs | Approximation, p. 73 | p. 76 | Heavy-tailed Sampling, | | |
| | defined in a domain, p. 68 | using QMC, p. 70 | | | p. 136 | | |
| 11:00-11:30 | Christopher Rauhögger, | Carlos Jerez-Hanckes, | $Sebastian\ Krumscheid,$ | Irina-Beatrice Haas, A | Ruben Seyer, Creating | | |
| | An adaptive Milstein-type | Domain Uncertainty | Double-loop randomized | nested Multilevel Monte | rejection-free samplers by | | |
| | method for strong | Quantification for | quasi-Monte Carlo | Carlo framework for | rebalancing skew-balanced | | |
| | approximation of systems | Electromagnetic Wave | estimator for nested | efficient simulations on | jump processes, p. 137 | | |
| | of SDEs with a | Scattering via First-Order | integration, p. 73 | FPGAs, p. 76 | | | |
| | discontinuous drift | Sparse Boundary Element | | | | | |
| 44 00 40 00 | coefficient, p. 68 | Approximation, p. 71 | | Ten on other | DI III | | |
| 11:30-12:00 | Verena Schwarz, Stong | Jürgen Dölz, Quantifying | Vinh Hoang, | Mike Giles, CUDA | Philippe Gagnon, | | |
| | order 1 adaptive | uncertainty in spectral | Posterior-Free A-Optimal | implementation of MLMC | Theoretical guarantees for | | |
| | approximation of | clusterings: expectations | Bayesian Design of | on NVIDIA GPUs, p. 77 | lifted samplers, p. 138 | | |
| | jump-diffusion SDEs with | for perturbed and | Experiments via | | | | |
| | discontinuous drift, p. 69 | incomplete data, p. 72 | Conditional Expectation, p. 74 | | | | |
| 12:00-12:30 | | Harri Hakula, Model | Vesa Kaarnioja, QMC for | Chung Ming Loi, Scalable | | | |
| | | Problems for PDEs on | Bayesian optimal | and User-friendly QMC | | | |
| | | Uncertain Domains, p. 72 | experimental design with | Sampling with UMBridge, | | | |
| | | | application to inverse | p. 78 | | | |
| | | | problems governed by | | | | |
| | | | PDEs, p. 75 | | | | |

Mon, Jul 28, 2025 – Afternoon

| 10.20 14.00 | 1VIOII, 3 til 20, 202 | o Aucinoon | | | | | |
|-------------|--|----------------------------|-----------------------------|----------------------------|--------------------------------|--|--|
| 12:30-14:00 | Lunch Break, TBD | | | | | | |
| 14:00-15:00 | HH Auditorium | | | | | | |
| | Plenary Talk: Christiane Lemieux, U of Waterloo, Golden ratio nets and sequences, p. 22 Chair: Nathan Kirk | | | | | | |
| 15:00-15:30 | Coffee Break, HH Lobby | | | | | | |
| | HH Auditorium | HH Ballroom | PH Auditorium | WH Auditorium | HH Alumni Lounge | | |
| | Special Session | Special Session Recent | Special Session | Technical Session 4 - | Technical Session 12 - | | |
| | Stochastic Computation | advances in optimization | Computational Methods | Quasi-Monte Carlo, Part 1 | PDEs | | |
| | and Complexity, Part II | under uncertainty p. 36 | for Low-discrepancy | Chair: TBD | Chair: TBD | | |
| | p. 35 | Chair: TBD | Sampling and Applications | | | | |
| | Chair: TBD | | p. 37 | | | | |
| | | | Chair: TBD | | | | |
| 15:30-16:00 | Michael Gnewuch, | Tapio Helin, Stability of | François Clément, | Christian Weiss, Halton | Adrien Richou, A | | |
| 10.00 10.00 | Optimality of deterministic | Expected Utility in | Searching Permutations | Sequences, Scrambling and | probabilistic Numerical | | |
| | and randomized | Bayesian Optimal | for Constructing | the Inverse | method for semi-linear | | |
| | QMC-cubatures on several | Experimental Design, p. 81 | Low-Discrepancy Point | Star-Discrepancy, p. 146 | elliptic Partial Differential | | |
| | scales of function spaces, | Experimental Besign, p. 01 | Sets and Inverstigating the | Star Biscrepancy, p. 110 | Equations, p. 169 | | |
| | p. 78 | | Kritzinger Sequence, p. 84 | | Equations, p. 103 | | |
| 16:00-16:30 | Kateryna Pozharska, | Karina Koval, Subspace | Nathan Kirk, Minimizing | Xiaoda Xu, Star | Abdujabar Rasulov, Monte | | |
| 10.00-10.50 | Optimal designs for | accelerated measure | the Stein Discrepancy, | discrepancy and uniform | Carlo method for the | | |
| | function discretization and | transport methods for fast | | approximation under | Spatially Homogenous | | |
| | | | p. 85 | | | | |
| | construction of tight | and scalable sequential | | weighted simple and | Boltzmann equation, | | |
| | frames, p. 80 | experimental design, p. 82 | | stratified random sampling | p. 169 | | |
| 10.00 15.00 | | 7 1 16:1 | | , p. 147 | 1.6: 1.41 A.D.T. | | |
| 16:30-17:00 | Leszek Plaskota, | Johannes Milz, | Makram Chahine, | Sifan Liu, Transport | Miguel Alvarez, A New | | |
| | Complexity of | Randomized quasi-Monte | Improving Efficiency of | Quasi-Monte Carlo, p. 148 | Approach for Unbiased | | |
| | approximating piecewise | Carlo methods for | Sampling-based Motion | | Estimation of Parameters | | |
| | smooth functions in the | risk-averse stochastic | Planning via | | of Partially Observed | | |
| | presence of deterministic | optimization, p. 83 | Message-Passing Monte | | Diffusions, p. 170 | | |
| | or random noise, p. 81 | | Carlo, p. 85 | | | | |
| 17:00-17:30 | | Arved Bartuska, Efficient | Gregory Seljak, An | $Ambrose\ Emmett-Iwaniw,$ | <i>Håkon Hoel</i> , High-order | | |
| | | expected information gain | Empirical Evaluation of | Using Normalizing Flows | adaptive methods for exit | | |
| | | estimators based on the | Robust Estimators for | for Efficient | times of diffusion processes | | |
| | | randomized quasi-Monte | RQMC, p. 86 | Quasi-Random Sampling | and reflected diffusions, | | |
| | | Carlo method, p. 83 | | for Copulas, p. 149 | p. 171 | | |
| 17:30-19:30 | Welcome Reception, HH Lob | oby | | | | | |
| | | | | | | | |

Tue, Jul 29, 2025 – Morning

| 00.00 17.00 | Tuc, 5th 25, 2020 | | | | | |
|-------------|--|--|---------------------------|------------------------------|----------------------------|--|
| 08:30-17:30 | 1 , | Registration Desk Open, HH Lobby | | | | |
| 09:00-10:00 | | | | | | |
| | Plenary Talk: Peter Glynn, Stanford U, Combining Simulation and Linear Algebra: COSIMLA, p. 23 Chair: Chang-Han Rhee | | | | | |
| 10:00-10:30 | Coffee Break, HH Lobby | | | | | |
| | HH Auditorium | HH Ballroom | PH Auditorium | WH Auditorium | HH Alumni Lounge | |
| | Special Session | Special Session | Special Session | Special Session Frontiers | Technical Session 2 - | |
| | Stochastic Computation | Next-generation optimal | Heavy-tailed Sampling | in (Quasi-)Monte Carlo | Bayesian Methods | |
| | and Complexity, Part III | experimental design: | p. 42 | and Markov Chain Monte | Chair: TBD | |
| | p. 39 | theory, scalability, and real | Chair: TBD | Carlo Methods, Part I | | |
| | Chair: TBD | world impact: Part I p. 40 | | p. 44 | | |
| | | Chair: TBD | | Chair: TBD | | |
| 10:30-11:00 | Jean-François | Xun Huan, Optimal Pilot | Sebastiano Grazzi, | Michael Mascagni, The | Lorenzo Nagar, | |
| | Chassagneux, Computing | Sampling for Multi-fidelity | Parallel computations for | Walk on Spheres Monte | Optimizing Generalized | |
| | the stationary measure of | Monte Carlo Methods, | Metropolis Markov chains | Carlo Algorithm for | Hamiltonian Monte Carlo | |
| | McKean-Vlasov SDEs, | p. 89 | Based on Picard maps, | Solving Partial Differential | for Bayesian Inference | |
| | p. 87 | p. 00 | p. 91 | Equations, p. 94 | applications, p. 139 | |
| 11:00-11:30 | - | Adrien Corenflos, A | Federica Milinanni, A | Hwanwoo Kim, Enhancing | Hamza Ruzaygat, | |
| 11.00 11.00 | convergence of the | recursive Monte Carlo | large deviation principle | Gaussian Process | Bayesian Anomaly | |
| | Euler-Maruyama scheme | approach to optimal | for Metropolis-Hastings | Surrogates for | Detection in | |
| | for McKean-Vlasov SDEs, | Bayesian experimental | sampling, p. 92 | Optimization and | Variable-Order and | |
| | p. 87 | design, p. 90 | 56mping, p. 52 | Posterior Approximation | Variable-Diffusivity | |
| | p. 01 | design, p. 50 | | via Random Exploration, | Fractional Mediums, p. 140 | |
| | | | | p. 95 | rractional Mediums, p. 140 | |
| 11:30-12:00 | Sotirios Sabanis, | Ayoub Belhadji, Weighted | Xingyu Wang, Sharp | p. 99 | Arghya Datta, Theoretical | |
| 11:30-12:00 | · · | | Characterization and | | Guarantees of Mean Field | |
| | Wasserstein Convergence of Score-based Generative | quantization using MMD: From mean field to mean | Control of Global | | Variational Inference for | |
| | Models under | | | | | |
| | | shift via gradient flows, | Dynamics of SGDs with | | Bayesian Principal | |
| | Semiconvexity and | p. 90 | Heavy Tails, p. 93 | | Component Analysis, | |
| | Discontinuous Gradients, | | | | p. 141 | |
| 10.00.10.00 | p. 88 | | | | T. T. 1 | |
| 12:00-12:30 | | | | | Jimmy Lederman, | |
| | | | | | Bayesian Analysis of | |
| | | | | | Latent Underdispersion | |
| | | | | | Using Discrete Order | |
| | | | | | Statistics, p. 141 | |

 ${\bf Tue,\,Jul\,\,29,\,2025-Afternoon}$

| 10.00 14.00 | 1 de, 5 di 25, 2020 | 7 THE THOOH | | | | | |
|-------------|--|--|---|--|--|--|--|
| 12:30-14:00 | Lunch Break, TBD | | | | | | |
| 14:00-15:00 | HH Auditorium | | | 10 1 1 | | | |
| | Plenary Talk: Roshan Joseph, Georgia Institute of Technology, Sensitivity and Screening: From Monte Carlo to Experimental Design, p. 24 Chair: Simon Mak | | | | | | |
| 15 00 15 20 | 0 , 1 | ormon Mak | | | | | |
| 15:00-15:30 | Coffee Break, HH Lobby HH Auditorium | HH Ballroom | DILA 1:4 : | XX711 A 1:4 : | TITT A1 · T | | |
| | | | PH Auditorium | WH Auditorium | HH Alumni Lounge Technical Session 5 - | | |
| | Special Session | Special Session | Special Session Advances in Rare Events | Special Session Frontiers | | | |
| | Stochastic Computation and Complexity, Part IV, | Next-generation optimal experimental design: | | in (Quasi-)Monte Carlo and Markov Chain Monte | Quasi-Monte Carlo, Part 2 Chair: TBD | | |
| | p. 45 | theory, scalability, and real | Simulation p. 48 Chair: TBD | Carlo Methods, Part II | Chair. IDD | | |
| | Chair: TBD | world impact: Part II p. 46 | Chair. IBD | p. 49 | | | |
| | Chair. 1DD | Chair: TBD | | Chair: TBD | | | |
| 15:30-16:00 | Larisa Yaroslavtseva, | Alen Alexanderian, Goal | Victor Elvira, Multiple | Takashi Goda, | Peter Kritzer, | | |
| 10.00 10.00 | Optimal strong | Oriented Sensor Placement | Importance Sampling for | Quasi-uniform | Approximation using | | |
| | approximation of SDEs | for Infinite-Dimensional | Rare Event Simulation in | quasi-Monte Carlo digital | median lattice algorithms, | | |
| | with Hölder continuous | Bayesian Inverse Problems | Communication Systems, | nets, p. 102 | p. 150 | | |
| | drift coefficient, p. 95 | , p. 97 | p. 100 | , F | F. 200 | | |
| 16:00-16:30 | $Gunther\ Leobacher,$ | jacopo iollo, | Bruno Tuffin, Asymptotic | Ziang Niu, Boosting the | Yang Liu, Convergence | | |
| | Tractability of | Diffusion-Based Bayesian | robustness of smooth | inference for generative | Rates of Randomized | | |
| | L_2 -approximation and | Experimental Design: | functions of rare-event | models by (Quasi-)Monte | Quasi-Monte Carlo | | |
| | integration in weighted | Advancing BED for | estimators, p. 100 | Carlo resampling, p. 103 | Methods under Various | | |
| | Hermite spaces of finite | Practical Applications, | | | Regularity Conditions, | | |
| | smoothness, p. 96 | p. 98 | | | p. 150 | | |
| 16:30-17:00 | Alexander Steinicke, | $Tommie\ Catanach,$ | Eya Ben Amar, | Chenyang Zhong, A hit | Jakob Dilen, Use of rank-1 | | |
| | Malliavin differentiation of | Robust Bayesian Optimal | Importance Sampling | and run approach for | lattices in the Fourier | | |
| | Lipschitz SDEs and | Experimental Design | Methods with Stochastic | sampling and analyzing | neural operator, p. 151 | | |
| | BSDEs and an Application | under Model | Differential Equations for | ranking models, p. 104 | | | |
| | to Quadratic | Misspecification, p. 99 | the Estimation of the | | | | |
| | Forward-Backward SDEs, | | Right Tail of the CCDF of | | | | |
| 17:00-17:30 | p. 97 | | the Fade Duration, p. 101 Shyam Mohan Subbiah | | Andit Inim Investigation | | |
| 17:00-17:50 | | | Pillai, Estimating rare | | Aadit Jain, Investigating the Optimum RQMC | | |
| | | | event probabilities | | Batch Size for Betting and | | |
| | | | associated with | | Empirical Bernstein | | |
| | | | McKean-Vlasov SDEs, | | Confidence Intervals, | | |
| | | | p. 101 | | p. 151 | | |
| | | | P. 201 | | P. 101 | | |

 $\mathbf{Wed},\,\mathbf{Jul}\,\,\mathbf{30},\,\mathbf{2025}-\mathbf{Morning}$

| 08:30-16:30 | Registration Desk Open, HH Lobby | | | | | | |
|-------------|---|---|--|---|--|--|--|
| 09:00-10:00 | HH Auditorium | | | | | | |
| | Plenary Talk: Michaela Szölgyenyi, U of Klagenfurt, An optimal transport approach to quantifying model uncertainty of | | | | | | |
| | SDEs, p. 25 Chair: Gunther Leobacher | | | | | | |
| 10:00-10:30 | · • | | | | | | |
| | HH Auditorium | HH Ballroom | PH Auditorium | WH Auditorium | HH Alumni Lounge | | |
| | Special Session | Special Session | Special Session | Technical Session 15 - | Technical Session 6 - | | |
| | Stochastic Computation | Statistical Design of | Advances in Adaptive | Simulation | Sampling | | |
| | and Complexity, Part V, | Experiments p. 51 | Hamiltonian Monte Carlo | Chair: TBD | Chair: \widetilde{TBD} | | |
| | p. 50 | Chair: TBD | p. 52 | | | | |
| | Chair: TBD | | Chair: TBD | | | | |
| 10:30-11:00 | Stefan Heinrich, On the quantum complexity of parametric integration in Sobolev spaces, p. 105 | Simon Mak, Respecting the boundaries: Space-filling designs for surrogate modeling with | Bob Carpenter, GIST: Gibbs self-tuning for locally adapting Hamiltonian Monte Carlo, | Philippe Blondeel, Combining quasi-Monte Carlo with Stochastic Optimal Control for | Akash Sharma, Sampling with constraints, p. 152 | | |
| | | boundary information, p. 107 | p. 110 | Trajectory Optimization of Autonomous Vehicles in Mine Counter Measure Simulations, p. 178 | | | |
| 11:00-11:30 | Bernd Käßemodel, | Chih-Li Sung, Stacking | Nawaf Bou-Rabee, | Rino Persiani, A Monte | Joonha Park, Sampling | | |
| | Quantum Integration in Tensor Product Besov | designs: designing | Acceleration of the | Carlo Approach to | from high-dimensional, multimodal distributions | | |
| | | multi-fidelity computer experiments with target | No-U-Turn Sampler, p. 110 | Designing a Novel Sample Holder for Enhanced | | | |
| | Spaces, p. 105 | predictive accuracy, p. 108 | | UV-Vis Spectroscopy, | using automatically tuned, tempered Hamiltonian | | |
| | | predictive accuracy, p. 108 | | p. 179 | Monte Carlo, p. 153 | | |
| 11:30-12:00 | Nikolaos Makras, Taming | Qian Xiao, Optimal | Chirag Modi, ATLAS: | Prasanth Shyamsundar, | Arne Bouillon, Localized | | |
| 11.50 12.00 | the Interacting Particle | design of experiments with | Adapting Trajectory | ARCANE Reweighting: A | consensus-based sampling | | |
| | Langevin Algorithm — | quantitative-sequence | Lengths and Step-Size for | technique to tackle the | for non-Gaussian | | |
| | The Superlinear Case, | factors, p. 109 | Hamiltonian Monte Carlo, | sign problem in the | distributions, p. 154 | | |
| | p. 106 | , P. 200 | p. 111 | simulation of collider | , P. 202 | | |
| | • | | • | events in high energy | | | |
| | | | | physics, p. 180 | | | |
| 12:00-12:30 | Iosif Lytras, Sampling | Chaofan Huang, Factor | $Trevor\ Campbell,$ | Nicole Aretz, Multifidelity | Alex Shkolnik, Importance | | |
| | with Langevin Dynamics | Importance Ranking and | AutoStep: Locally | and Surrogate Modeling | Sampling for Hawkes | | |
| | from non-smooth and | Selection using Total | adaptive involutive | Approaches for | Processes, p. 154 | | |
| | non-logconcave potentials., | Indices, p. 109 | MCMC, p. 112 | Uncertainty Quantification | | | |
| | p. 106 | | | in Ice Sheet Simulations, | | | |
| | | | | p. 181 | | | |

${\bf Wed,\,Jul\,\,30,\,2025-Afternoon}$

| 12:30-14:00 | Lunch Break, TBD | Anternoon | | | |
|----------------------------|--|---|---|---|--|
| 12.30-14.00 | HH Auditorium Special Session Stochastic Optimization p. 54 Chair: TBD | HH Ballroom Special Session Recent Progress on Algorithmic Discrepancy Theory and Applications, p. 55 Chair: TBD | PH Auditorium Special Session Monte Carlo Applications in High-performance Computing, Computer Graphics, and Computational Science, p. 56 Chair: TBD | WH Auditorium Technical Session 16 - Statistics Chair: TBD | HH Alumni Lounge Technical Session 10 - Langevin Chair: TBD |
| 14:00-14:30 | Raghu Bollapragada, Monte Carlo Based Adaptive Sampling Approaches for Stochastic Optimization, p. 112 | Haotian Jiang, Algorithmic Discrepancy Theory: An Overview, p. 114 | Arash Fahim, Gaining efficiency in Monte Carlo policy gradient methods for stochastic optimal control, p. 115 | Kazeem Adeleke, Empirical Statistical Comparative Analysis of SNP Heritability Estimators and Gradient Boosting Machines (GBM) Using Genetic Data from the UK Biobank, p. 181 | Attila Lovas, Stochastic gradient Langevin dynamics with non-stationary data, p. 163 |
| 14:30–15:00 | Shane Henderson, A New Convergence Analysis of Two Stochastic Frank-Wolfe Algorithms, p. 113 | Peng Zhang, Improving the Design of Randomized Experiments via Discrepancy Theory, p. 114 | Silei Song, WoS-NN: Collaborating Walk-on-Spheres with Machine Learning to Solve Ellip- tic PDEs, p. 116 | Carles Domingo-Enrich, Cheap permutation testing , p. 182 | Sara Pérez-Vieites, Langevin-based strategies for nested particle filters, p. 164 |
| 15:00-15:30 | | Aleksandar Nikolov, Online Factorization for Online Discrepancy Minimization, p. 115 | | Christopher Draper, Moving PCG beyond LCGs, p. 183 | |
| 15:30–16:00 | | | | Yiming Xu, Hybrid least squares for learning functions from highly noisy data, p. 183 | |
| 16:00–16:30 18:00–20:30 | Coffee Break, HH Lobby Conference Dinner, Bridgep | ort Arts Center | | | |

Thu, Jul 31, 2025 – Morning

| 08:30-17:30 | Registration Desk Open, HE | 0 | | | | | |
|-------------|--|---|-----------------------------|--|---|--|--|
| 09:00-10:00 | HH Auditorium | · · | | | | | |
| | Plenary Talk: Uros Seljak, UC Berkeley, Gradient-Based MCMC Sampling: Methods and Optimization Strategies, p. 26 | | | | | | |
| | Chair: Tim Hobbs | | | | | | |
| 10:00-10:30 | Coffee Break, HH Lobby | | | | | | |
| | HH Auditorium | HH Ballroom | PH Auditorium | WH Auditorium | HH Alumni Lounge | | |
| | Special Session QMC | Special Session Analysis | Special Session Nested | Technical Session 8 - | Technical Session 13 - ML | | |
| | and Applications Part I | of Langevin and Related | expectations: models and | Finance | & Optimization | | |
| | p. 57 | Sampling Algorithms, Part | estimators, Part II p. 59 | Chair: TBD | Chair: TBD | | |
| | Chair: TBD | Į p. 58 | Chair: TBD | | | | |
| | | Chair: TBD | | | | | |
| 10:30-11:00 | Felix Bartel, Exact | Krishnakumar | $RAUL\ TEMPONE,$ | Matyokub Bakoev, The | Frédéric Blondeel, | | |
| | discretization, tight frames | Bala subramanian, | Multilevel randomized | Stochastic Differential | Learning cooling strategies | | |
| | and recovery via | Finite-Particle | quasi-Monte Carlo | Equations of the Heston | in simulated annealing | | |
| | D-optimal designs, p. 117 | Convergence Rates for | estimator for nested | Model for Option Pricing, | through binary | | |
| | | Stein Variational Gradient | expectations, p. 122 | p. 158 | interactions, p. 172 | | |
| 11 00 11 00 | 15 0 | Descent, p. 119 | 16 | | D 0 | | |
| 11:00-11:30 | Mou Cai, | Lihan Wang, Convergence | Matteo Raviola, Stochastic | Vincent Zhang, | Du Ouyang, Accuracy of | | |
| | L2-approximation: using | rates of kinetic Langevin | gradient with least-squares | Characterizing Efficacy of | Discretely Sampled | | |
| | randomized lattice algorithms and QMC | dynamics with weakly confining potentials, p. 120 | control variates, p. 123 | Geometric Brownian Metion Expectation based | Stochastic Policies in Continuous-Time | | |
| | hyperinterpolation, p. 118 | comming potentials, p. 120 | | Motion Expectation-based Simulations on | Reinforcement Learning, | | |
| | hyperinterpolation, p. 118 | | | Low-Volatility American | p. 173 | | |
| | | | | Common Stocks, p. 159 | р. 179 | | |
| 11:30-12:00 | Zhijian He, | Peter Whalley, | Philipp Guth, A one-shot | Hao Quan, Efficient | Wei Cai, Martingale deep | | |
| 11.00 12.00 | High-dimensional density | Randomized Splitting | method for Bayesian | Pricing for Variable | neural networks for | | |
| | estimation on unbounded | Methods and Stochastic | optimal experimental | Annuity via Simulation, | quasi-linear PDEs and | | |
| | domain, p. 118 | Gradient Algorithms, | design, p. 124 | p. 161 | stochastic optimal controls | | |
| | , r | p. 121 | 3 / F | r | in 10,000 dimensions, | | |
| | | | | | p. 174 | | |
| 12:00-12:30 | Frances Y. Kuo, | Xiaoou Cheng, | | | Yiqing Zhou, Minimizing | | |
| | Application of QMC to | Delocalization of Bias in | | | Functions with Sparse | | |
| | Oncology, p. 119 | Unadjusted Hamiltonian | | | Samples: A Fast | | |
| | | Monte Carlo, p. 122 | | | Interpolation Approach, | | |
| | | | | | p. 174 | | |

Thu, Jul 31, 2025 – Afternoon

| 14:00-15:00 HH Auditorium Talk: Nicolas Chopin, Institut Polytechnique de Paris, Saddlepoint Monte Carlo and its application to exact ecological inference, p. 27 Chair: Bruno Puffix | 19.20 14.00 | And I I D I TEND | | | | | | | | |
|--|-------------|---------------------------------------|---------------------------|-----------------------|---------------------------|-----------------------|--|--|--|--|
| Plemary Talk: Nicolas Chopin, Institut Polytechnique de Paris, Saddlepoint Monte Carlo and its application to exact coclogical inference, p. 27 Chair: Bruno Taifin | | Lunch Break, TBD | | | | | | | | |
| 15:00-15:30 Coffee Break, IIII Lobby HH Auditorium Special Session QMC and Applications Part II p. 60 Chair: TBD Sampling Algorithms, Part II p. 61 Chair: TBD Chair: T | 14:00-15:00 | | | | | | | | | |
| 15:00-15:30 Coffee Break, HH Lobby HH Auditorium Special Session QMC and Applications Part II p. 61 Chair: TBD Dirk Nuyens, Approximation of multivariate periodic functions, p. 124 Constraints, p. 127 Variance, p. 129 Variance, p. 129 Variance, p. 129 Consideration of Bias, p. 127 Variance, p. 129 Variance, p. 120 Variance, p | | | | | | | | | | |
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| and Applications Part II p. 60 | | | | | | | | | | |
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| Chair: TBD | | | | | | | | | | |
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| 18:00–20:30 Steering Committee Meeting (by invitation), TBD | 18:00-20:30 | | | | | | | | | |

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. 63 Chair: TBD | HH Ballroom Special Session Hardware or Software for (Quasi-)Monte Carlo Algorithms, Part II p. 64 Chair: TBD | PH Auditorium Technical Session 3 - Simulation Chair: TBD | WH Auditorium Technical Session 9 - Sampling Chair: TBD | HH Alumni Lounge Technical Session 14 - Markov Chain Monte Carlo Chair: TBD | | |
| 09:00-09:30 | Zhou Fang, Fixed-budget simulation method for growing cell populations, p. 130 | Niklas Baumgarten, A High-performance Multi-level Monte Carlo Software for Full Field Estimates and Applications in Optimal Control, p. 133 | Yashveer Kumar, Monte Carlo simulation approach to solve distributed order fractional mathematical model, p. 143 | Nicola Branchini, Revisiting self-normalized importance sampling: new methods and diagnostics, p. 161 | Kevin Bitterlich, Delayed Acceptance Slice Sampling: A Two-Level method for Improved Efficiency in High-Dimensional Settings , p. 175 | | |
| 09:30-10:00 | Sophia Münker, Dimensionality Reduction for Efficient Rare Event Estimation, p. 131 | Aleksei Sorokin, Fast Gaussian Processes, p. 134 | Serena Fattori, Benchmarking the Geant4-DNA 'UHDR' Example for Monte Carlo Simulation of pH Effects on Radiolytic Species Yields Using a Mesoscopic Approach, p. 143 | Daniel Yukimura, Quantitative results on sampling from quasi-stationary distributions, p. 162 | Reuben Cohn-Gordon, Gradient-based MCMC in high dimensions, p. 176 | | |
| 10:00-10:30 | Maksim Chupin, Filtered Markovian Projection: Dimensionality Reduction in Filtering for Stochastic Reaction Networks, p. 132 | Johannes Krotz, Hybrid Monte Carlo methods for kinetic transport, p. 135 | Toon Ingelaere, Multilevel simulation of ensemble Kalman methods: interactions across levels, p. 145 | Amit Subrahmanya, Serial ensemble filtering with marginal coupling, p. 163 | Philip Schaer, Parallel Affine Transformation Tuning: Drastically Improving the Effectiveness of Slice Sampling, p. 177 | | |
| 10:30-11:00 | Muruhan Rathinam, State and parameter inference in stochastic reaction networks, p. 133 | | Muhammad Noor ul Amin, Adaptive Max-EWMA Control Chart with SVR: Monte Carlo Simulation for Run Length Analysis, p. 145 | | Annabelle Carrell, Low-Rank Thinning, p. 178 | | |
| | Coffee Break, HH Lobby | | | | | | |
| 11:00-12:00 | HH Auditorium Plenary Talk: Veronika Ročková, U of Chicago, AI-Powered Bayesian Inference, p. 28 Chair: Art Owen | | | | | | |
| 12:00-12:15 | Closing Remarks by TBD, HH Auditorium | | | | | | |
| 12.00-12.10 | Closing Itemarks by TDD, IIII Auditorium | | | | | | |