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	Nota di contenuto	Part I Tutorials, Fred J. Hickernell, The Trio Identity for Quasi-Monte Carlo Error -- Pierre L'Ecuyer, Randomized Quasi-Monte Carlo: An Introduction for Practitioners -- Frances Y. Kuo and Dirk Nuyens, Application of Quasi-Monte Carlo Methods to PDEs with Random Coefcients – an Overview and Tutorial -- Part II Invited talks, Jose Blanchet and Zhipeng Liu, Malliavin-based Multilevel Monte Carlo Estimators for Densities of Max-stable Processes -- Nicolas Chopin and Mathieu Gerber, Sequential quasi-Monte Carlo: Introduction for Non-Experts, Dimension Reduction, Application to Partly Observed Diffusion Processes -- Frances Y. Kuo and Dirk Nuyens, Hot New Directions for Quasi-Monte Carlo Research in Step with Applications -- Saul Toscano-Palmerin and Peter I. Frazier, Stratied Bayesian Optimization -- Part III

Regular talks, Christoph Aistleitner, Dmitriy Bilyk, and Aleksandar Nikolov, Tusnady's Problem, the Transference Principle, and Non-Uniform QMC Sampling -- Ken Dahm and Alexander Keller, Learning Light Transport the Reinforced Way -- Adrian Ebert, Hernan Leovey, and Dirk Nuyens, Successive Coordinate Search and Component-by-Component Construction of Rank-1 Lattice Rules -- Wei Fang and Michael B. Giles, Adaptive Euler-Maruyama method for SDEs with non-globally Lipschitz drift -- J. Feng and M. Huber and Y. Ruan, Monte Carlo with User-Specied Relative Error -- Robert N. Gantner, Dimension Truncation in QMC for Afne-Parametric Operator Equations -- Michael B. Giles, Frances Y. Kuo, and Ian H. Sloan, Combining Sparse Grids, Multilevel MC and QMC for Elliptic PDEs with Random Coefcients -- Hiroshi Haramoto and Makoto Matsumoto, A Method to Compute an Appropriate Sample Size of a Two-Level Test for the NIST Test Suite -- Stefan Heinrich, Lower Complexity Bounds for Parametric Stochastic Itoˆ Integration -- Lukas Herrmann and Christoph Schwab, QMC Algorithms with Product Weights for Lognormal-Parametric, Elliptic PDEs -- Masatake Hirao, QMC Designs and Determinantal Point Processes -- Adam W. Kolkiewicz, Efcient Monte Carlo For Diffusion Processes Using Ornstein-Uhlenbeck Bridges -- Ralph Kritzinger, Optimal Discrepancy Rate of Point Sets in Besov Spaces with Negative Smoothness -- Ralph Kritzinger, Helene Laimer, and Mario Neumuller, A Reduced Fast Construction of Polynomial Lattice Point Sets with Low Weighted Star Discrepancy -- David Mandel and Giray Okten, Randomized Sobol' Sensitivity Indices -- Hisanari Otsu, Shinichi Kinuwaki, and Toshiya Hachisuka, Supervised Learning of How to Blend Light Transport Simulations -- Pieterjan Robbe, Dirk Nuyens, and Stefan Vandewalle, A Dimension-Adaptive Multi-Index Monte Carlo Method Applied to a Model of a Heat Exchanger -- Shuang Zhao, Rong Kong, and Jerome Spanier, Towards Real-Time Monte Carlo for Biomedicine -- Zeyu Zheng, Jose Blanchet, and Peter W. Glynn, Rates of Convergence and CLTs for Subcanonical Debiased MLMC.

| Sommario/riassunto | This book presents the refereed proceedings of the Twelfth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing that was held at Stanford University (California) in August 2016. These biennial conferences are major events for Monte Carlo and quasi-Monte Carlo researchers. The proceedings include articles based on invited lectures as well as carefully selected contributed papers on all theoretical aspects and applications of Monte Carlo and quasi-Monte Carlo methods. Offering information on the latest developments in these very active areas, this book is an excellent reference resource for theoreticians and practitioners interested in solving high-dimensional computational problems, arising in particular, in finance, statistics, computer graphics and the solution of PDEs. |