

| | |
|-------------------------|--|
| 1. Record Nr. | UNINA9910299982203321 |
| Autore | Leobacher Gunther |
| Titolo | Introduction to Quasi-Monte Carlo Integration and Applications // by Gunther Leobacher, Friedrich Pillichshammer |
| Pubbl/distr/stampa | Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2014 |
| ISBN | 3-319-03425-1 |
| Edizione | [1st ed. 2014.] |
| Descrizione fisica | 1 online resource (XII, 195 p. 21 illus., 16 illus. in color.) : online resource |
| Collana | Compact Textbooks in Mathematics, , 2296-455X |
| Disciplina | 519.282 |
| Soggetti | Number theory Numerical analysis Social sciences - Mathematics Number Theory Numerical Analysis Mathematics in Business, Economics and Finance |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Bibliographic Level Mode of Issuance: Monograph |
| Nota di contenuto | Preface -- Notation -- 1 Introduction -- 2 Uniform Distribution Modulo One -- 3 QMC Integration in Reproducing Kernel Hilbert Spaces -- 4 Lattice Point Sets -- 5 (t, m, s)-nets and (t, s)-Sequences -- 6 A Short Discussion of the Discrepancy Bounds -- 7 Foundations of Financial Mathematics -- 8 Monte Carlo and Quasi-Monte Carlo Simulation -- Bibliography -- Index. |
| Sommario/riassunto | This textbook introduces readers to the basic concepts of quasi-Monte Carlo methods for numerical integration and to the theory behind them. The comprehensive treatment of the subject with detailed explanations comprises, for example, lattice rules, digital nets and sequences and discrepancy theory. It also presents methods currently used in research and discusses practical applications with an emphasis on finance-related problems. Each chapter closes with suggestions for further reading and with exercises which help students to arrive at a deeper understanding of the material presented. The book is based on a one-semester, two-hour undergraduate course and is well-suited for |

readers with a basic grasp of algebra, calculus, linear algebra and basic probability theory. It provides an accessible introduction for undergraduate students in mathematics or computer science.
