

1. Record Nr.	UNINA9910136666703321
Autore	Shrock Cheryl R.
Titolo	Advanced Autocad 2016 : exercise workbook / / by Cheryl R. Shrock ; updated for AutoCAD 2016 by Steve Heather
Pubbl/distr/stampa	South Norwalk, Connecticut : , : Industrial Press, Inc., , 2015 ©2015
ISBN	0-8311-9333-6 0-8311-9332-8
Descrizione fisica	1 online resource (526 pages) : illustrations
Disciplina	620.00420285
Soggetti	Computer-aided design
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.

2. Record Nr.	UNINA9910830283103321
Autore	Kalos Malvin H
Titolo	Monte Carlo methods [[electronic resource] /] / Malvin H. Kalos, Paula A. Whitlock
Pubbl/distr/stampa	Weinheim, : Wiley-Blackwell, c2008
ISBN	1-62198-230-0 1-282-68811-1 9786612688119 3-527-62621-2 3-527-62622-0
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (217 p.)
Altri autori (Persone)	WhitlockPaula A
Disciplina	518.282
Soggetti	Monte Carlo method
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Previous ed.: New York; Chichester: Wiley 1986.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Monte Carlo Methods; Contents; Preface to the Second Edition; Preface to the First Edition; 1 What is Monte Carlo?; 1.1 Introduction; 1.2 Topics to be Covered; 1.3 A Short History of Monte Carlo; References; 2 A Bit of Probability; 2.1 Random Events; 2.2 Random Variables; 2.2.1 The Binomial Distribution; 2.2.2 The Geometric Distribution; 2.2.3 The Poisson Distribution; 2.3 Continuous Random Variables; 2.4 Expectations of Continuous Random Variables; 2.5 Bivariate Continuous Random Distributions; 2.6 Sums of Random Variables: Monte Carlo Quadrature 2.7 Distribution of the Mean of a Random Variable: A Fundamental Theorem2.8 Distribution of Sums of Independent Random Variables; 2.9 Monte Carlo Integration; 2.10 Monte Carlo Estimators; References; Further Reading; Elementary; More Advanced; 3 Sampling Random Variables; 3.1 Transformation of Random Variables; 3.2 Numerical Transformation; 3.3 Sampling Discrete Distributions; 3.4 Composition of Random Variables; 3.4.1 Sampling the Sum of Two Uniform Random Variables; 3.4.2 Sampling a Random Variable Raised to a Power; 3.4.3 Sampling the Distribution $f(z) = z(1 - z)$ 3.4.4 Sampling the Sum of Several Arbitrary Distributions3.5 Rejection

Techniques; 3.5.1 Sampling a Singular pdf Using Rejection; 3.5.2 Sampling the Sine and Cosine of an Angle; 3.5.3 Kahn's Rejection Technique for a Gaussian; 3.5.4 Marsaglia et al. Method for Sampling a Gaussian; 3.6 Multivariate Distributions; 3.6.1 Sampling a Brownian Bridge; 3.7 The M(RT)<sup>2</sup> Algorithm; 3.8 Application of M(RT)<sup>2</sup>; 3.9 Testing Sampling Methods; References; Further Reading; 4 Monte Carlo Evaluation of Finite-Dimensional Integrals; 4.1 Importance Sampling; 4.2 The Use of Expected Values to Reduce Variance; 4.3 Correlation Methods for Variance Reduction; 4.3.1 Antithetic Variates; 4.3.2 Stratification Methods; 4.4 Adaptive Monte Carlo Methods; 4.5 Quasi-Monte Carlo; 4.5.1 Low-Discrepancy Sequences; 4.5.2 Error Estimation for Quasi-Monte Carlo Quadrature; 4.5.3 Applications of Quasi-Monte Carlo; 4.6 Comparison of Monte Carlo Integration, Quasi-Monte Carlo and Numerical Quadrature; References; Further Reading; 5 Random Walks, Integral Equations, and Variance Reduction; 5.1 Properties of Discrete Markov Chains; 5.1.1 Estimators and Markov Processes; 5.2 Applications Using Markov Chains; 5.2.1 Simulated Annealing; 5.2.2 Genetic Algorithms; 5.2.3 Poisson Processes and Continuous Time Markov Chains; 5.2.4 Brownian Motion; 5.3 Integral Equations; 5.3.1 Radiation Transport and Random Walks; 5.3.2 The Boltzmann Equation; 5.4 Variance Reduction; 5.4.1 Importance Sampling of Integral Equations; References; Further Reading; 6 Simulations of Stochastic Systems: Radiation Transport; 6.1 Radiation Transport as a Stochastic Process; 6.2 Characterization of the Source; 6.3 Tracing a Path; 6.4 Modeling Collision Events; 6.5 The Boltzmann Equation and Zero Variance Calculations; 6.5.1 Radiation Impinging on a Slab

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## Sommario/riassunto

This introduction to Monte Carlo methods seeks to identify and study the unifying elements that underlie their effective application. Initial chapters provide a short treatment of the probability and statistics needed as background, enabling those without experience in Monte Carlo techniques to apply these ideas to their research. The book focuses on two basic themes: The first is the importance of random walks as they occur both in natural stochastic systems and in their relationship to integral and differential equations. The second theme is that of variance reduction in general and impor

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