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Altri autori (Persone)	KloedenPeter E GerstnerThomas
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Nota di contenuto	1. Multilevel Monte Carlo methods for applications in finance / Mike Giles and Lukasz Szpruch -- 2. Convergence of numerical methods for SDEs in finance / Peter Kloeden and Andreas Neuenkirch -- 3. Inverse problems in finance / J. Baumeister -- 4. Asymptotic and non asymptotic approximations for option valuation / R. Bompis and E. Gobet -- 5. Discretization of backward stochastic Volterra integral equations / Christian Bender and Stanislav Pokalyuk -- 6. Semi-Lagrangian schemes for parabolic equations / Kristian Debrabant and Espen Robstad Jakobsen -- 7. Derivative-free weak approximation methods for stochastic differential equations / Kristian Debrabant and Andreas RoBler -- 8. Wavelet solution of degenerate Kolmogoroff forward equations / Oleg Reichmann and Christoph Schwab -- 9. Randomized multilevel quasi-Monte Carlo path simulation / Thomas Gerstner and Marco Noll -- 10. Drift-Free Simulation methods for pricing cross-market derivatives with LMM / J.L. Fernandez ... [et al.] -- 11. Application of simplest random walk algorithms for pricing barrier options / M. Krivko and M.V. Tretyakov -- 12. Coupling local currency Libor models to FX Libor models / John Schoenmakers -- 13. Dimension-wise decompositions and their efficient parallelization / Philipp Schroder, Peter Mlynczak and Gabriel Wittum.

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## Sommario/riassunto

Computational finance is an interdisciplinary field which joins financial mathematics, stochastics, numerics and scientific computing. Its task is to estimate as accurately and efficiently as possible the risks that financial instruments generate. This volume consists of a series of cutting-edge surveys of recent developments in the field written by leading international experts. These make the subject accessible to a wide readership in academia and financial businesses. The book consists of 13 chapters divided into 3 parts: foundations, algorithms and applications. Besides surveys of existing results, the book contains many new previously unpublished results.

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