

Premia 18

Monte Carlo Methods

Topics:

Monte Carlo Simulation

Pseudo Random Generator

Quasi Monte Carlo Methods

Monte Carlo for Barrier Option

Competitive Monte Carlo methods for Asian Options

Monte Carlo methods for American Options

A quantization method for Pricing and Hedging American Options

Malliavin Calculus for European options

Malliavin Calculus for Asian Option in a Pure Jump Model

Malliavin Calculus for American Option Pricing

Variance reduction and Robbins-Monro Algorithm

Variance reduction and Longstaff-Schwartz Algorithm

Ninomiya Victoir Scheme for Asian Options in Heston Model

Kusuoka-Ninomiya-Ninomyia Scheme for Asian Options in Heston Model

Ninomiya Victoir Scheme for Asian Options in Heston Model:Stage Rapport

Functional Quantization for Asian Options in Heston Model

Functional Stochastic Approximation Scheme for American Option Pricing

Monte Carlo option pricing for tempered stable (CGMY) processes

Monte Carlo option pricing for swing options using a Malliavin approach

Exact retrospective Monte Carlo computation of arithmetic average Asian options

Adaptive stratification for Asian options

A second-order discretization scheme for the CIR process: application to the Heston model

Numerical algorithms for backward differential equations

Primal Dual algorithm for American options

Upper bound for bermudan swaptions in the LMM Model

Survey of Monte Carlo methods for the Heston model

Cubature on Wiener space in infinite dimension. Application to HJM-equations

Robust Adaptive Importance Sampling for Normal Random Vectors

Polynomial processes and their applications to mathematical Finance

Exact and high order discretization schemes for Wishart processes

Connecting discrete and continuous lookback under exponential Lévy model

Simulation of Lookback Options under Infinite Activity Lévy Model

Pricing of Exotic Options under Infinite Activity Lévy Model

Pricing in Garch models

Pricing and hedging American-style options: a simple simulation-based approach

Iterative Construction of the Optimal Bermudan Stopping Time

Estimating the Delta of Options by the Likelihood Ratio Method

Gamma Expansion of the Heston Stochastic Volatility Model

Pricing Convertible Bonds with Call Protection

High order discretization schemes for stochastic volatility models

Double Heston simulation

Monte Carlo method for Timer options

Stochastic grid method for American options

A finite dimensional approximation for pricing moving average options.

Importance sampling and Statistical Romberg Method

Scaling and multiscaling in financial series: a simple model

Toward a coherent Monte Carlo simulation of CVA

Cutting CVAs complexity

Stochastic local intensity loss models with interacting particle system.

Importance sampling and Statistical Romberg Method for jump models.

Wiener-Hopf Monte Carlo simulation approach for pricing path-dependent options under Lévy

Managing Gap Risks in iCPPI for life insurance companies:A risk/return/cost analysis.

Being particular about calibration.

The Heston Stochastic-Local Volatility Model: Efficient Monte Carlo Simulation

Simple Simulation Scheme for CIR and Wishart Processes.

Importance sampling for jump processes and applications to finance.

Low-bias simulation scheme for the Heston model by Inverse Gaussian approximation.

Dynamic optimal execution in a mixed-market-impact Hawkes price model

The $4/2$ Stochastic Volatility Model.

The Stochastic Grid Bundling Method

Importance Sampling for Multilevel Monte Carlo.

Pricing American-Style Options by Monte Carlo Simulation: Alternatives to Ordinary Least Squares

Ninomiya-Victoir scheme: strong convergence, antithetic version and application to multilevel es

Pricing American options using Martingale bases