

# Premia 5

## Monte Carlo Methods

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Routine mc_inbaldi.c
Routine mc_outbaldi.c
Routine mc_parisianin.c
Routine mc_parisianout.c
Routine mc_baldi_in.c
Routine mc_baldi_out.c
Routine mc_parisianin.c
Routine mc_parisianout.c
Routine mc_variancereduction.c
Routine mc_fixedasian_glassermann.c
Routine mc_fixedasian_kemnavorst.c
Routine mc_fixedasian_robbinsmoro.c
Routine mc_floatingasian_standard.c
Routine mc_lookbackmax_andersen.c
Routine mc_lookbackmin_andersen.c
Routine mc_antithetic.c
Routine mc_barraquandmartineau.c
Routine mc_broadieglassermann.c
Routine mc_lionsregnier.c
Routine mc_longstaffschwartz.c
Routine mc_randomquantization.c
Routine mc_rogers.c
Routine mc_standard.c
Routine mc_tsitsiklisvanroy.c
Routine mc_barraquandmartineau2d.c
Routine mc_broadieglassermann2d.c
Routine mc_lionsregnier2d.c
Routine mc_longstaffschwartz2d.c
Routine mc_randomquantization2d.c
Routine mc_standard2d.c
Routine mc_dupire.c
Routine mc_robbinsmoro_hes.c
Routine mc_robbinsmoro_hw.c
Routine mc_merton.c
```

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 American Option Pricing

Variance reduction and Robbins-Monro algorithms