EFFICIENT RISK MANAGEMENT IN MONTE CARLO

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This minicourse is divided into two modules. The first shorter module covers variance reduction techniques that can be used to reduce the computational time of Monte Carlo valuations. The second, more extended module, covers the calculation of Greeks in Monte Carlo, including a review of classical approaches like the Likelihood Ratio and the Pathwise Derivative Method and an introduction to Adjoint Algorithmic Differentiation (AAD). Several case studies taken form the recent literature on the topic are discussed at length.