A number of Monte Carlo simulation-based approaches have been proposed within the past decade to address the problem of pricing American-style financial derivatives, which are contracts that allow early exercise. We have proposed an approach that parameterizes the early exercise curve and casts the valuation problem as an optimization problem of maximizing the expected payoff (under the martingale measure) with respect to the associated parameters, the optimization problem carried out using a gradient-based stochastic approximation algorithm. We focus on the stochastic gradient estimation problem, and report on numerical results for the algorithm in pricing a number of different types of options.

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