A Memory Reduction Method in Pricing American Options

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Summary. This talk concerns with the pricing of American options by simulation methods. In the traditional methods, in order to determine when to exercise, we have to store the simulated asset prices at all time steps on all paths. If N time steps and M paths are used, then the storage requirement is O(MN). Here we present a simulation method for pricing American options where the number of storage required only grows like O(M). For machines with limited memory, we can now use a larger N to improve the accuracy in pricing the options.