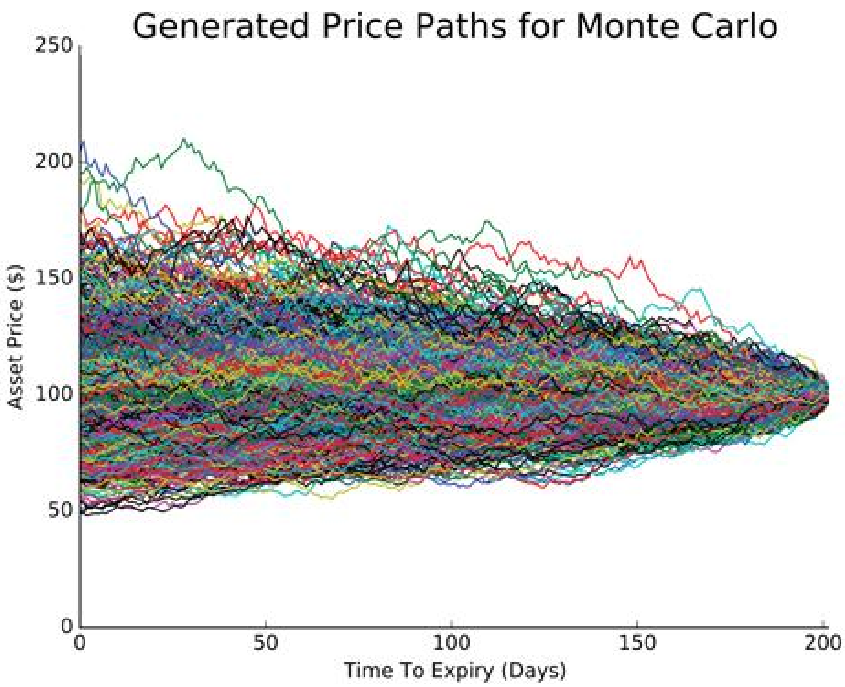
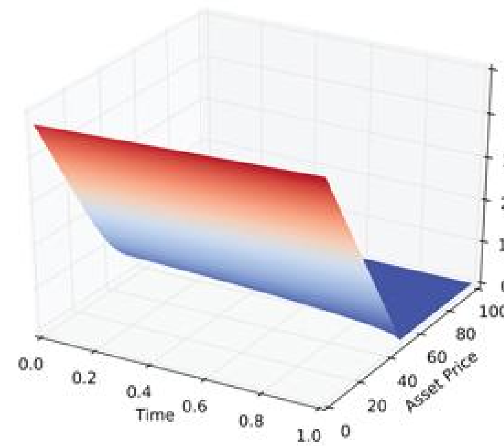
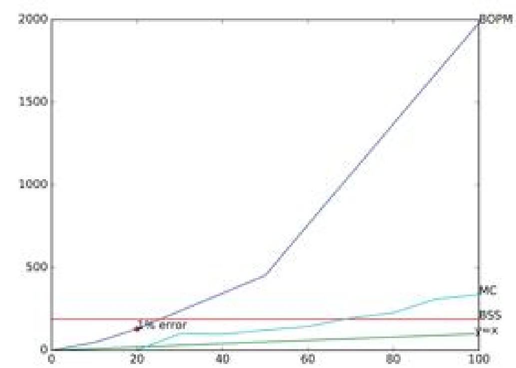
INCORPORATING PHYSICAL COMPUTATIONAL METHODS IN SOLVING FINANCIAL ENGINEERING MODELS







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Financial models are based in the same assumptions that drive the modern physics domain. Quantum physics operates on stochastic and probabilistic conjectures that are not capable of deterministically predicting the future, but rather give estimates and distributions for how particles behave under certain conditions. Similarly, the financial models that price complex securities like stock options cannot positively say what the price of assets will be in the future, but instead give an estimate of what the asset is worth. This project explored five different methods for pricing stock options, as well as developing a computational simplification that brings one of these methods to be a leading choice for certain firms in the financial space looking to capitalize on liquidity inefficiencies.

WORK SPACE SHOWCASE
THE COOPER UNION ANNUAL STUDENT EXHIBITION
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