STOCHASTIC OPTIMIZATION IN R&D PORTFOLIO MANAGEMENT

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ABSTRACT

Large corporations spend considerable effort to manage their Research and Development (R&D) portfolio. A major component of successful R&D Portfolio Management is the use of mathematical tools and techniques to optimize the set of R&D projects that will be initiated or continued. Generally, the optimization is done from a deterministic perspective. In this presentation, we will demonstrate the potential benefits of optimizing an R&D portfolio from a stochastic perspective. Specifically, we will look at the use of Monte Carlo simulation combined with deterministic optimization to determine a portfolio that is robust to stochastic influences.