

## Statistics and Data Science Seminar

### *Tail Portfolio*

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**Abstract:** This paper focuses on portfolio construction at tails. The classical mean-variance portfolio focuses on the first two moments of a return distribution. However, asset returns usually are not Gaussian distributed; rather, they have long and fat tails. As a complementary approach, this paper studies and incorporates tail risk into portfolio optimization. Using 1970 to 2019 S&P 500 data, an empirical study was performed by constructing realistic stock selection investment strategies. The results indicate that quantile optimization produces practical tail portfolios with volatility, diversity and turnover comparable to the classical mean-variance approach. Moreover, a tail portfolio outperforms the mean-variance portfolio consistently over the period studied, particularly when the market is bearish.

Wednesday, November 15 at 4:00 PM in 636 SEO