

Stochastic Finance

Final Assignments 2024

Choose ONE of the following:

1. Risk measures: Theory, computation and applications
2. Portfolio choice and optimization: Theory, computation and applications
3. Time series models for financial assets; Garch and beyond: Theory, computation and applications
4. American options: Theory, computation and applications.
5. Machine learning techniques in finance: Theory, computation and applications
6. Variance reduction techniques for Monte-Carlo pricing: Theory, computation and applications

Indicative Reference List.

1. Mc Neil, Frey Embrechts Quantitative Risk Management
2. Cornejols, Tutuncu, Optimization methods in Finance 2018 CUP
3. Tsay, Analysis of financial time series, Willey 2005 and 1.
4. Privault Lecture notes <https://personal.ntu.edu.sg/nprivault/MA5182/american-options.pdf>
5. Financial Machine Learning Bryan T. Kelly and Dacheng Xiu July 2023
6. Pages, Gilles. "Numerical probability." Universitext, Springer (2018).