

Syllabus 2026; Prof. Alessandro Ramponi

 17 Week 11:  May 7

Macro topics: Step 8a - Construction: one-period portfolios, Step 8b - Construction: estimation risk, Applications



Theory

- Step 8a: Portfolio optimization
- Fundamental concepts 
- Smooth programming
- Convex programming
- Quadratic regularization
- Selection problems
- Mean-variance framework 
- Analytical mean-variance
- Numerical mean-variance
- Step 8b: Estimation and model risk 
- Mean-variance frequentist optimization
- Minimum torsion bets attribution of variance
- Ex-ante performance attribution - Historical 
- Step 7b - Ex-ante risk attribution - Historical 
- Step 8a: Construction - Historical 



Selected homework

- Convex programming
- Portfolio optimization framework
- Analytical mean-variance optimization
- Optimization: general concepts