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<u>Research Areas:</u>

- Asset pricing
- Market microstructure
- Performance evaluation

<u>Research Tools:</u>

- Structural models of trading processes and pricing
- Computing has primarily been on Rice's finance server (72 cores) with bash scripting parallelization
- Primary languages: Python, SAS, Stata

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Computational/Research Challenges:

- Structural estimation often involves maximizing likelihoods for many time periods and/or securities
- Most finance datasets are small *T,* so lots of simulation for finite sample properties of estimators
- Data management: trading data is on order of 20-50 GB per day
- Increasing use of machine learning for forecasting time-series and cross-section of returns
- Improved, more efficient workflow for coauthor collaboration