

**Syllabus for  
MTH 9879: Market Microstructure Models**

Textbooks:

*Market Liquidity* by Thierry Foucault, Marco Pagano and Ailsa Röell, Oxford, 2013

*Empirical Market Microstructure* by Joel Hasbrouck, Oxford, 2007

Market mechanisms

Theoretical and empirical models of the order book

The market/limit order decision

Inventory models

Rational expectations and models of strategic trading

Market making

Sequential trade models

Understanding the bid-ask spread

Variance and covariance estimation

The long memory of order flow

Models of market impact

Market impact of meta-orders

Price manipulation

Optimal execution strategies

Modeling latency

Optimal order routing algorithms