

# Roadmap

HCC

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## Market How-To

### Basic

- Iqbal - Volatility; Practical Options Theory
- Iqbal - Foreign Exchange; Practical Asset Pricing and Macroeconomic Theory
- Interest Rate Markets; A Practical Approach to Fixed Income
- Fixed Income Securities; Tools for Today's Markets
- The Front Office Manual; The Definitive Guide to Trading, Structuring and Sales (2013)

### Q-Fin

- Lehalle - Market Microstructure Knowledge Needed for Controlling an Intra-Day Trading Process
- Lehalle - Optimal liquidity-based trading tactics
- Lehalle -
- Lehalle, Laruelle - Market Microstructure in Practice, Second Edition
- Jacob - Stochastic Processes for Physicists; Understanding Noisy Systems (2010)
- Gueant - The Financial Mathematics of Market Liquidity; From Optimal Execution to Market Making (2016)
- Bouchaud - Theory of financial risk and derivative pricing; From statistical physics to risk management

- Bouchaud - Trades, Quotes and Prices; Financial Markets Under the Microscope
- Spadafora - Theoretical Foundations Quantitative Finance (All the Financial Math You Need to Survive)

## Archive

### [q-fin.TR]

- 2016, Market Microstructure Invariance: Empirical Hypotheses
- 2023, A Bayesian derivation of the square root law of market impact
  - Hiroki 2020 A Brief Introductory Review of Information Thermodynamic
- 2023, A time-dependent Markovian model of a limit order book
- 2023, Direct quantitative evidence of the order-splitting hypothesis as the microscopic origin of long-range correlations in market order flow

### $\aleph_\alpha$

- Explainable AI in Futures
- 2021, Todorov, “Passive Funds Affect Prices: Evidence from the Most ETF-dominated Asset Classes”
- 2023, Unifying Market Microstructure and Dynamic Asset Pricing
- 2023, Why Topological Data Analysis Detects Financial Bubbles?

## Larger than Life

### Estimation

- Doerfler, Dead Reckoning
- Migdal
- Wells: Effective Theories in Physics

### Bayesian

- Bayesian Statistical Modeling With Stan, R, and Python
- Barreda and Silbert, Bayesian Multilevel Models for Repeated Measures Data
- McElreath, Statistical rethinking
- Bayesian Essentials with R, Second Edition

### Physics

- Becker-Becker-Schwarz
- CFT for hep-ph
- Hollowood: Renormalization Group and Fixed Points in QFT

### Math

- Lenister’s Basic Category Theory

## **Fun**

- Complex Integration; A Compendium of Smart and Little-Known Techniques for Evaluating Integrals and Sums
- A Short Journey from Quarks to the Universe