



Programme

# Market Microstructure



**Do you want to learn more about how the landscape of financial markets has evolved over the last decades? In this programme we will provide a review of the main changes and cover a wide range of modeling approaches starting from basic equilibrium models to more state-of-the-art reduced form models including analytical and numerical tools.**

This programme provides a concise introduction to the field of Market Microstructure, which studies how prices, quotes, and trades interact on a high-frequency time scale. The programme will start with a brief review of how the organization of financial markets has changed dramatically over the last decades.

The second part of the programme will then cover a number of basic equilibrium models that allow to understand some of the key economic tradeoffs in this context.

To provide an introduction of how these basic principles can be leveraged in practice, the third part of the programme then moves on to state-of-the-art reduced form models that can be used for the quantitative analysis of problems such as optimal trading or market making. We will review some of the analytical and numerical tools that are available in this context, and will also discuss how to fit such models to real price and trading data.

#### **What makes this programme unique?**

- It is unique due to its specialized focus, It provides an in-depth knowledge and skills specific to understanding the intricacies of market dynamics, order book mechanisms, and price formation.
- It is also unique due to its emphasis on practical application and interdisciplinary approach incorporating concepts from economics, finance, mathematics, and computer science.

#### **Who is this programme for?**

Quantitative analysts, traders, financial engineers,

risk managers, financial regulators, financial analysts and academic researchers.

*Required prior knowledge:* Bachelor in Mathematics, statistics, econometrics, actuarial sciences or computational science.

#### **After this programme:**

- you have learned about the setup of today's electronic markets.
- you will understand basic economic tradeoffs such as adverse selection and inventory management, and their implications for price formation, liquidity provision, and trading on proprietary information.
- you have learned how to implement and leverage these ideas using quantitative 'reduced form models' for market making and optimal trading.
- you see how the models can be calibrated to real trading data.

#### **Practical information:**

##### **Dates:**

- Monday March 25th 2024 from 10:00 - 15:00
- Tuesday March 26th 2024 from 10:00 - 15:00
- Tuesday May 28th 2024 from 10:00 - 15:00
- Wednesday May 29th 2024 from 9:00 - 12:00

**Duration:** Four lectures (half days) in total

**Teaching method:** On site

**Location:** Lab42, Science Park 900, Amsterdam

**Language:** English

**Certificate:** After completing the programme you will receive a certificate of the University of Amsterdam

**Maximum number of participants:** 25

**Tuition:** € 1.995,-

##### **Sign up:**

To sign up for this programme, please visit our website: [academy.uva.nl/marketmicrostructure](https://academy.uva.nl/marketmicrostructure)

##### **Questions?**

If you have any questions, please contact us by sending an e-mail to: [professionaleducation-ivi@uva.nl](mailto:professionaleducation-ivi@uva.nl)



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