

## Arbitrage and algorithmic trading (theory and hands-on programming)

From the introduction of simple VWAP execution algorithms on the buy side, algorithmic trading has grown into a crucial aspect of the current market structure. These days, next to the various buy-side algorithms, proprietary and high frequency algorithmic strategies are profligate. With the availability of trading tools, algorithmic trading is now in reach for all traders able to translate their ideas into trading scripts.

### Contents of the course are as follows:

#### Introduction to Arbitrage

- Pure arbitrage
- Dual listings
- 'arbitrage' strategies

#### Introduction to Algorithmic Trading

- History
- Buy-side execution algorithms (from VWAP to sophisticated)

#### Developments in market structure

- Fragmentation of markets
- Reduced 'lit' liquidity (hidden orders, dark pools etc)

#### Introduction into Algorithmic Trading Software

- Functionality
- Basic scripting and parameters
- Coding a basic strategy

#### Building your own algorithmic strategy

- Strategy definition
- Backtesting your strategy
- Finetuning trading Parameters
- Risk Management
- Trading your strategy in real-time

### Literature

- Algorithmic Trading & DMA (Barry Johnson)
- TPE trading examples syllabus

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*All courses will include the use of professional trading and analysis software. The hands-on training environment will allow the participant to experience a real-time trading environment on our virtual exchange. This enables the inclusion of Trading Games (either click trading, position management or running your own algorithm) into the course curriculum.*