# Algo-trading on financial markets

**Concept.** The idea here is to use the Q-Hawkes processes and the Bouchaud work to come up with some interesting simulations of financial markets.

- Full sim: fully individual agent-based stochastic model for limit order book

- Inference model: Q-Hawkes process inference features using the probabilistic reweighting

- Maybe also try amortized inference-based full sim inference.


- Fundamental simulation should be that of a proper limit order book microsim [1]

- Algo trades using online learning of the market dynamics through Q-Hawkes processes

# Bibliography

[1] J.-P. Bouchaud, J. Bonart, J. Donier, and M. Gould, *Trades, quotes and prices: financial markets under the microscope.* Cambridge University Press, 2018.