

Lab sessions plan

- Week 1: Tutorial on MATLAB
- Week 2: Newton's method to compute implied volatility
- Week 3: Delta-hedging in the Black-Scholes model
- Week 4: Pricing European options in Hestons model using inverse Fourier transform
- Week 5: Calibration of Heston's model to market data
- Week 6: Pricing of European option in Heston's model using the Monte Carlo method
- Week 7: Variance reduction method in the Black-Scholes model for Asian option pricing
- Week 8: Finite difference method to solve the Black-Scholes PDE
- Week 9: Finite difference method to solve the Heston model PDE
- Week 10: Calibration of Dupire's model to market data