These lectures are based on the book *Mathematical Modeling and Computation in Finance* by Kees Oosterlee and Lech Grzelak. There is also a companion website with solutions to selected exercises and a lot more. The slides of the lectures and python code have been made available on the Computational Finance page of Lech’s github page.

The video lectures, all on YouTube, are the following.

- Lecture 1/14: Introduction and Overview of Asset Classes
- Lecture 2/14: Stock, Options and Stochastics
- Lecture 3/14: Option Pricing and Simulation in Python
- Lecture 4/14: Implied Volatility
- Lecture 5/14: Jump Processes
- Lecture 6/14: Affine Jump Diffusion Processes
- Lecture 7/14: Stochastic Volatility Models
- Lecture 8/14: Fourier Transformation for Option Pricing
- Lecture 9/14: Monte Carlo Simulation
- Lecture 10/14: Monte Carlo Simulation of the Heston Model:
- Lecture 11/14: Hedging and Monte Carlo Greeks
- Lecture 12/14: Forward Start Options and Model of Bates
- Lecture 13/14: Exotic Derivatives
- Lecture 14/14: Summary of the Course