

Financial Derivatives with C++

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Vega Institute, Summer School,
July 4-9, 2022

The course is organized around a powerful C++ library for pricing of derivative securities. You will learn key ideas behind implementations of financial models, master pricing algorithms of derivative securities, and code them with C++.

The list of topics:

1. Pricing = replication. Backward induction. Rollback operator. State process.
2. Pricing algorithms for stock options with C++.

The course assumes some familiarity with

- object oriented programming with C++,
- pricing and hedging of derivative securities,
- numerical analysis,
- stochastic calculus.

A “training” set of exercises will be distributed along with the course package. As part of the Summer School Quantathon, there will be a 4-hours competition at the end of the course, where you will be asked to code pricing algorithms for a number of exotic financial products.