Financial Instrument Pricing Using C++
Daniel J. Duffy

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DESCRIPTION

One of the best languages for the development of financial engineering and instrument pricing applications is C++. This book has several features that allow developers to write robust, flexible and extensible software systems. The book is an ANSI/ISO standard, fully object-oriented and interfaces with many third-party applications. It has support for templates and generic programming, massive reusability using templates ("write once") and support for legacy C applications.

In this book, author Daniel J. Duffy brings C++ to the next level by applying it to the design and implementation of classes, libraries and applications for option and derivative pricing models. He employs modern software engineering techniques to produce industrial-strength applications:

• Using the Standard Template Library (STL) in finance
• Creating your own template classes and functions
• Reusable data structures for vectors, matrices and tensors
• Classes for numerical analysis (numerical linear algebra ?)
• Solving the Black Scholes equations, exact and approximate solutions
• Implementing the Finite Difference Method in C++
• Integration with the ?Gang of Four? Design Patterns
• Interfacing with Excel (output and Add-Ins)

• Financial engineering and XML

• Cash flow and yield curves

Included with the book is a CD containing the source code in the Datasim Financial Toolkit. You can use this to get up to speed with your C++ applications by reusing existing classes and libraries.

'Unique... Let's all give a warm welcome to modern pricing tools.'
-- Paul Wilmott, mathematician, author and fund manager

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**ABOUT THE AUTHOR**

Daniel Duffy works for Datasim, an Amsterdam-based trainer and software developer (www.datasim-component.com, www.datasim.nl). He has been working in IT since 1979 and with object-oriented technology since 1987. He received his MSc and PhD theses (in numerical analysis) from Trinity College, Dublin. His current interests are in the modelling of financial instruments using numerical methods (for example, finite difference method) and C++. He can be contacted at dduffy@datasim.nl

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