



# Computational Methods for Option Pricing (Frontiers in Applied Mathematics)

By Yves Achdou, Olivier Pironneau



## Computational Methods for Option Pricing (Frontiers in Applied Mathematics) By Yves Achdou, Olivier Pironneau

This book is a must for becoming better acquainted with the modern tools of numerical analysis for several significant computational problems arising in finance. Important aspects of finance modeling are reviewed, involving partial differential equations and numerical algorithms for the fast and accurate pricing of financial derivatives and the calibration of parameters. The best numerical algorithms are fully explored and discussed, from their mathematical analysis up to their implementation in C++ with efficient numerical libraries. This is one of the few books that thoroughly covers the following topics: mathematical results and efficient algorithms for pricing American options; modern algorithms with adaptive mesh refinement for European and American options; regularity and error estimates are derived and give strong support to the mesh adaptivity, an essential tool for speeding up the numerical implementations; calibration of volatility with European and American options; the use of automatic differentiation of computer codes for computing greeks.

 [Download Computational Methods for Option Pricing \(Frontier ...pdf](#)

 [Read Online Computational Methods for Option Pricing \(Fronti ...pdf](#)

# **Computational Methods for Option Pricing (Frontiers in Applied Mathematics)**

*By Yves Achdou, Olivier Pironneau*

**Computational Methods for Option Pricing (Frontiers in Applied Mathematics)** By Yves Achdou, Olivier Pironneau

This book is a must for becoming better acquainted with the modern tools of numerical analysis for several significant computational problems arising in finance. Important aspects of finance modeling are reviewed, involving partial differential equations and numerical algorithms for the fast and accurate pricing of financial derivatives and the calibration of parameters. The best numerical algorithms are fully explored and discussed, from their mathematical analysis up to their implementation in C++ with efficient numerical libraries. This is one of the few books that thoroughly covers the following topics: mathematical results and efficient algorithms for pricing American options; modern algorithms with adaptive mesh refinement for European and American options; regularity and error estimates are derived and give strong support to the mesh adaptivity, an essential tool for speeding up the numerical implementations; calibration of volatility with European and American options; the use of automatic differentiation of computer codes for computing greeks.

**Computational Methods for Option Pricing (Frontiers in Applied Mathematics)** By Yves Achdou, Olivier Pironneau **Bibliography**

- Sales Rank: #3339319 in Books
- Published on: 2005-07-01
- Original language: English
- Number of items: 1
- Dimensions: 8.98" h x .67" w x 5.98" l, 1.25 pounds
- Binding: Paperback
- 297 pages

 [Download Computational Methods for Option Pricing \(Frontier ...pdf](#)

 [Read Online Computational Methods for Option Pricing \(Fronti ...pdf](#)

## **Download and Read Free Online Computational Methods for Option Pricing (Frontiers in Applied Mathematics) By Yves Achdou, Olivier Pironneau**

---

### **Editorial Review**

#### **About the Author**

Yves Achdou is a Professor at the Université Denis Diderot, Paris. He was awarded the Prix Blaise Pascal de l'Académie des Sciences in 1998.

Olivier Pironneau is a Professor at the Université Pierre et Marie Curie, Paris. He has been a member of the Académie des Sciences since 2002 and is the author of more than 300 articles and eight books.

### **Users Review**

#### **From reader reviews:**

##### **Vincent Overly:**

Information is provisions for folks to get better life, information these days can get by anyone on everywhere. The information can be a understanding or any news even a concern. What people must be consider when those information which is in the former life are difficult to be find than now could be taking seriously which one is appropriate to believe or which one the actual resource are convinced. If you obtain the unstable resource then you understand it as your main information we will see huge disadvantage for you. All those possibilities will not happen with you if you take Computational Methods for Option Pricing (Frontiers in Applied Mathematics) as the daily resource information.

##### **Mark Mata:**

Are you kind of stressful person, only have 10 or 15 minute in your moment to upgrading your mind skill or thinking skill even analytical thinking? Then you have problem with the book as compared to can satisfy your short time to read it because all this time you only find guide that need more time to be go through. Computational Methods for Option Pricing (Frontiers in Applied Mathematics) can be your answer as it can be read by a person who have those short free time problems.

##### **Wanda Sousa:**

Don't be worry when you are afraid that this book will filled the space in your house, you may have it in e-book technique, more simple and reachable. This particular Computational Methods for Option Pricing (Frontiers in Applied Mathematics) can give you a lot of good friends because by you looking at this one book you have factor that they don't and make you actually more like an interesting person. This specific book can be one of a step for you to get success. This book offer you information that perhaps your friend doesn't know, by knowing more than various other make you to be great individuals. So , why hesitate? We need to have Computational Methods for Option Pricing (Frontiers in Applied Mathematics).

**Barbara Saddler:**

Reading a publication make you to get more knowledge from it. You can take knowledge and information from the book. Book is written or printed or descriptive from each source that filled update of news. In this particular modern era like currently, many ways to get information are available for a person. From media social just like newspaper, magazines, science guide, encyclopedia, reference book, book and comic. You can add your knowledge by that book. Isn't it time to spend your spare time to open your book? Or just seeking the Computational Methods for Option Pricing (Frontiers in Applied Mathematics) when you required it?

**Download and Read Online Computational Methods for Option Pricing (Frontiers in Applied Mathematics) By Yves Achdou, Olivier Pironneau #FLOTWVDUE36**

# **Read Computational Methods for Option Pricing (Frontiers in Applied Mathematics) By Yves Achdou, Olivier Pironneau for online ebook**

Computational Methods for Option Pricing (Frontiers in Applied Mathematics) By Yves Achdou, Olivier Pironneau Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Computational Methods for Option Pricing (Frontiers in Applied Mathematics) By Yves Achdou, Olivier Pironneau books to read online.

## **Online Computational Methods for Option Pricing (Frontiers in Applied Mathematics) By Yves Achdou, Olivier Pironneau ebook PDF download**

**Computational Methods for Option Pricing (Frontiers in Applied Mathematics) By Yves Achdou, Olivier Pironneau Doc**

**Computational Methods for Option Pricing (Frontiers in Applied Mathematics) By Yves Achdou, Olivier Pironneau MobiPocket**

**Computational Methods for Option Pricing (Frontiers in Applied Mathematics) By Yves Achdou, Olivier Pironneau EPub**

**FLOTWVDUE36: Computational Methods for Option Pricing (Frontiers in Applied Mathematics) By Yves Achdou, Olivier Pironneau**