

Springer

 5th  
edition

 5th ed. 2016, XXXI, 922 p.  
88 illus., 20 illus. in color.

### Printed book

Hardcover

### Printed book

Hardcover

ISBN 978-3-662-49886-6

 £ 64,99 | CHF 88,50 | 74,99 € |  
82,49 € (A) | 80,24 € (D)

Available

Sale price valid through June 30, 2021

 £ 29,99 | CHF 41,50 | 34,99 € |  
38,49 € (A) | 37,44 € (D)

### Discount group

Standard (0)

### Product category

Undergraduate textbook

### Series

 Texts in Computational Science and  
Engineering

### Other renditions

Softcover

ISBN 978-3-662-57046-3

Softcover

ISBN 978-3-662-49888-0

## Mathematics : Computational Science and Engineering

Langtangen, Hans Petter

# A Primer on Scientific Programming with Python

- Example-oriented text with all applications taken from science and engineering
- Aimed at newcomers to programming and Python, but proved to be useful for professionals too
- All examples are accompanied by complete program codes, which can be modified to the reader's needs
- Covers both Matlab-style "simple" programming and object-oriented programming
- Demonstrates how Python can be an alternative to Matlab in scientific computing

The book serves as a first introduction to computer programming of scientific applications, using the high-level Python language. The exposition is example and problem-oriented, where the applications are taken from mathematics, numerical calculus, statistics, physics, biology and finance. The book teaches "Matlab-style" and procedural programming as well as object-oriented programming. High school mathematics is a required background and it is advantageous to study classical and numerical one-variable calculus in parallel with reading this book. Besides learning how to program computers, the reader will also learn how to solve mathematical problems, arising in various branches of science and engineering, with the aid of numerical methods and programming. By blending programming, mathematics and scientific applications, the book lays a solid foundation for practicing computational science. From the reviews: Langtangen ... does an excellent job of introducing programming as a set of skills in problem solving. He guides the reader into thinking properly about producing program logic and data structures for modeling real-world problems using objects and functions and embracing the object-oriented paradigm. ... Summing Up: Highly recommended. F. H. Wild III, Choice, Vol.

### Order online at [springer.com/booksellers](https://www.springer.com/booksellers)

Springer Nature Customer Service Center GmbH

Customer Service

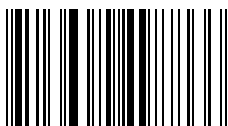
Tiergartenstrasse 15-17

69121 Heidelberg

Germany

T: +49 (0)6221 345-4301

row-booksellers@springernature.com



ISBN 978-3-662-49886-6 / BIC: PDE / SPRINGER NATURE: SCM14026

Prices and other details are subject to change without notice. All errors and omissions excepted. Americas: Tax will be added where applicable. Canadian residents please add PST, QST or GST. Please add \$5.00 for shipping one book and \$ 1.00 for each additional book. Outside the US and Canada add \$ 10.00 for first book, \$5.00 for each additional book. If an order cannot be fulfilled within 90 days, payment will be refunded upon request. Prices are payable in US currency or its equivalent.

 Part of **SPRINGER NATURE**