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Titolo	Introduction to Scientific Programming with Python [[electronic resource] /] / by Joakim Sundnes
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ISBN	3-030-50356-9
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XIV, 148 p. 3 illus.)
Collana	Simula SpringerBriefs on Computing, , 2512-1677 ; ; 6
Disciplina	004
Soggetti	Computer mathematics Computer software Computer programming Software engineering Computer science—Mathematics Computational Science and Engineering Professional Computing Programming Techniques Software Engineering/Programming and Operating Systems Mathematics of Computing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Getting started with Python -- Computing with formulas -- Loops and lists -- Functions and branching -- User input and error handling -- Arrays and plotting -- Dictionaries and strings -- Classes -- Object-oriented programming.
Sommario/riassunto	This open access book offers an initial introduction to programming for scientific and computational applications using the Python programming language. The presentation style is compact and example-based, making it suitable for students and researchers with little or no prior experience in programming. The book uses relevant examples from mathematics and the natural sciences to present programming as a practical toolbox that can quickly enable readers to write their own programs for data processing and mathematical

modeling. These tools include file reading, plotting, simple text analysis, and using NumPy for numerical computations, which are fundamental building blocks of all programs in data science and computational science. At the same time, readers are introduced to the fundamental concepts of programming, including variables, functions, loops, classes, and object-oriented programming. Accordingly, the book provides a sound basis for further computer science and programming studies.

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