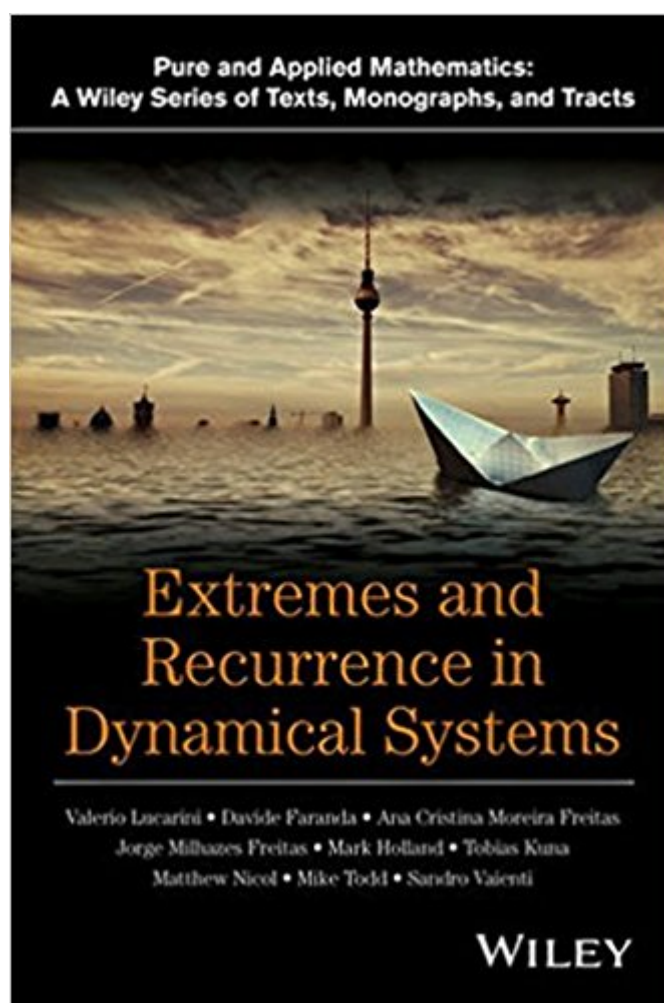


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Extremes And Recurrence In Dynamical Systems (Pure And Applied Mathematics: A Wiley Series Of Texts, Monographs And Tracts)



Synopsis

Written by a team of international experts, *Extremes and Recurrence in Dynamical Systems* presents a unique point of view on the mathematical theory of extremes and on its applications in the natural and social sciences. Featuring an interdisciplinary approach to new concepts in pure and applied mathematical research, the book skillfully combines the areas of statistical mechanics, probability theory, measure theory, dynamical systems, statistical inference, geophysics, and software application. Emphasizing the statistical mechanical point of view, the book introduces robust theoretical embedding for the application of extreme value theory in dynamical systems. *Extremes and Recurrence in Dynamical Systems* also features:

- A careful examination of how a dynamical system can serve as a generator of stochastic processes
- Discussions on the applications of statistical inference in the theoretical and heuristic use of extremes
- Several examples of analysis of extremes in a physical and geophysical context
- A final summary of the main results presented along with a guide to future research projects
- An appendix with software in Matlab® programming language to help readers to develop further understanding of the presented concepts

Extremes and Recurrence in Dynamical Systems is ideal for academics and practitioners in pure and applied mathematics, probability theory, statistics, chaos, theoretical and applied dynamical systems, statistical mechanics, geophysical fluid dynamics, geosciences and complexity science.

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Book Information

Series: Pure and Applied Mathematics: A Wiley Series of Texts, Monographs and Tracts

Hardcover: 312 pages

Publisher: Wiley; 1 edition (April 25, 2016)

Language: English

ISBN-10: 1118632192

ISBN-13: 978-1118632192

Product Dimensions: 6.4 x 1 x 9.5 inches

Shipping Weight: 1.4 pounds (View shipping rates and policies)

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