



An expert view critically evaluating the prospects and significance—for 21st century physics—of ontological quantum mechanics, an approach which David Bohm helped pioneer.

Emergent Quantum Mechanics

David Bohm Centennial Perspectives

OPTICAL EFFECTS IN SOLIDS

An overview of the optical effects in solids, addressing the physics of various materials and their response to electromagnetic radiation including discussions on metals, semiconductors, superconductors and insulators.

— DAVID B. TANNER —

EXPLORING PLANETARY CLIMATE

A History of Scientific Discovery on Earth, Mars, Venus and Titan

RALPH D. LORENZ

The history of climate science and planetary exploration, focusing on our ever-expanding knowledge of Earth's climate, and the parallel research underway on our nearest neighbours: Mars, Venus and Titan.

Principles of Thermodynamics

Jean-Philippe Ansermet and Sylvain D. Brechet

An introductory textbook presenting thermodynamics as a natural extension of mechanics.

new in the library

June 2019 - Physics



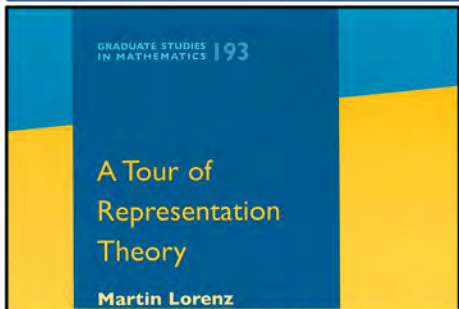
Credit: Andrew McCarthy @cosmic background

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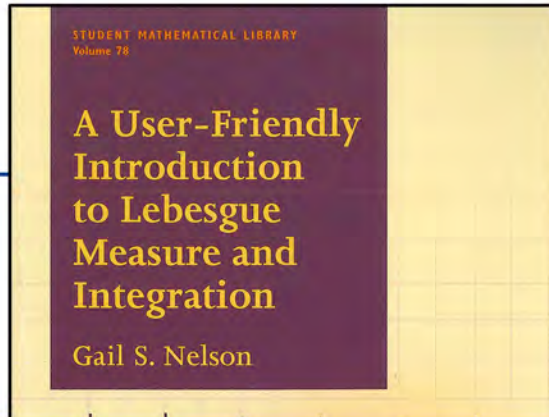


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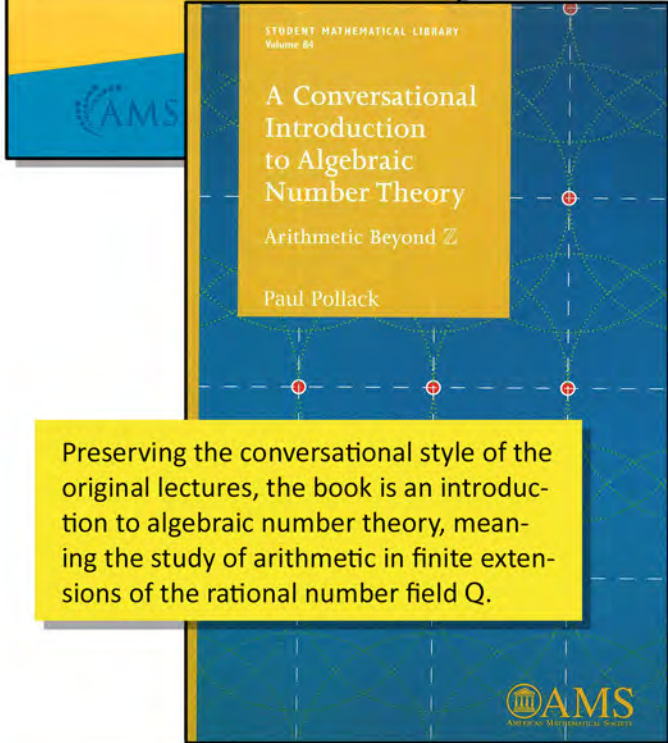
June 2019 - Mathematics



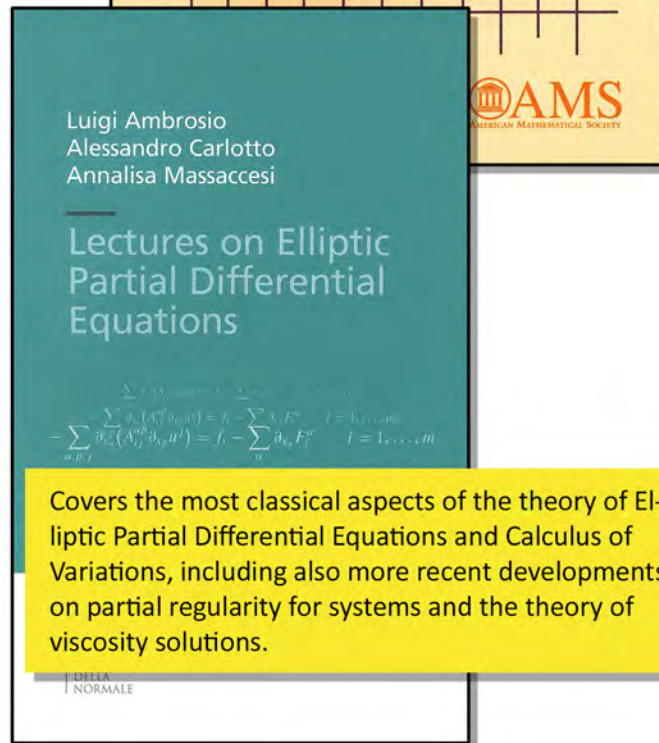
The broad range of topics covered makes the text a valuable reference for researchers in algebra and related areas and a source for graduate and postgraduate students wishing to learn more about representation theory by self-study.



Provides a bridge between an undergraduate course in Real Analysis and a first graduate-level course in Measure Theory and Integration. The main goal of this book is to prepare students for what they may encounter in graduate school.



Preserving the conversational style of the original lectures, the book is an introduction to algebraic number theory, meaning the study of arithmetic in finite extensions of the rational number field Q.



$$\sum_{\alpha, \beta, \gamma} A_{\alpha, \beta, \gamma} u^{\alpha} v^{\beta} w^{\gamma} = \sum_{\alpha, \beta, \gamma} B_{\alpha, \beta, \gamma} u^{\alpha} v^{\beta} w^{\gamma}$$

$$\sum_{\alpha, \beta, \gamma} \partial_{\alpha} (A_{\alpha, \beta, \gamma} u^{\alpha} v^{\beta} w^{\gamma}) = f_i - \sum_{\alpha, \beta, \gamma} \partial_{\alpha} (B_{\alpha, \beta, \gamma} u^{\alpha} v^{\beta} w^{\gamma}) \quad i = 1, \dots, m$$

Covers the most classical aspects of the theory of Elliptic Partial Differential Equations and Calculus of Variations, including also more recent developments on partial regularity for systems and the theory of viscosity solutions.



Image Credit: NASA

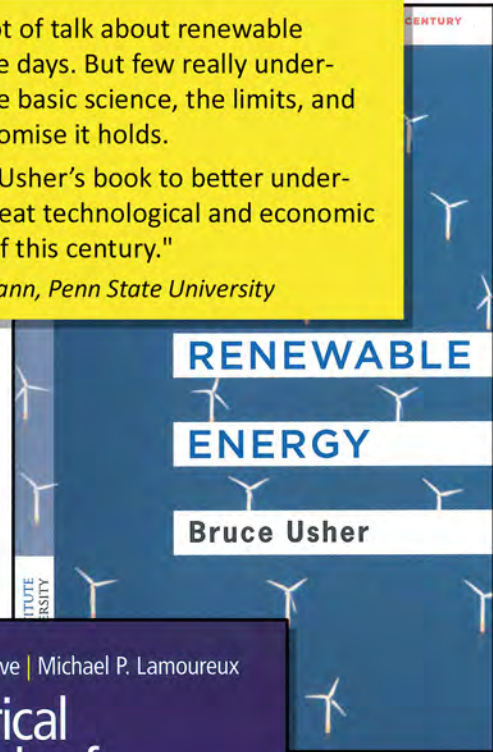
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Read Bruce Usher's book to better understand the great technological and economic revolution of this century."

Michael E. Mann, Penn State University



RENEWABLE

ENERGY

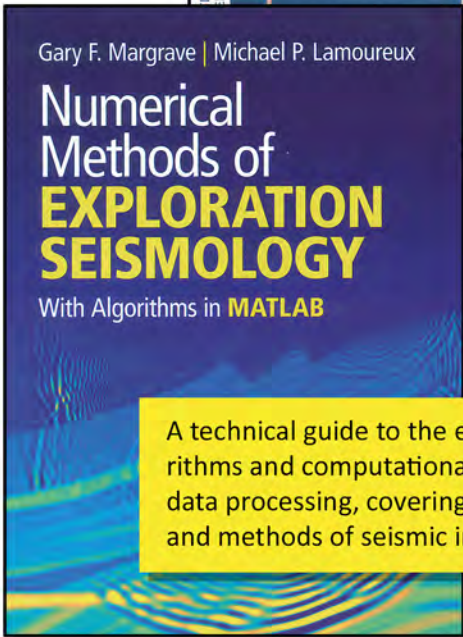
Bruce Usher

Gary F. Margrave | Michael P. Lamoureux

Numerical Methods of EXPLORATION SEISMOLOGY

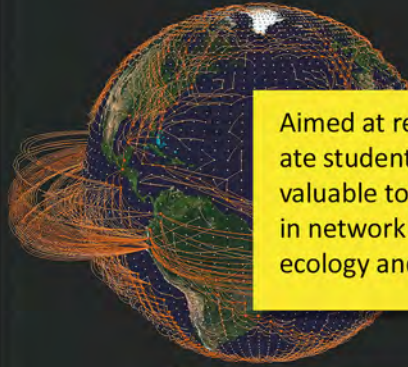
With Algorithms in **MATLAB**

A technical guide to the essential algorithms and computational aspects of data processing, covering the theory and methods of seismic imaging.

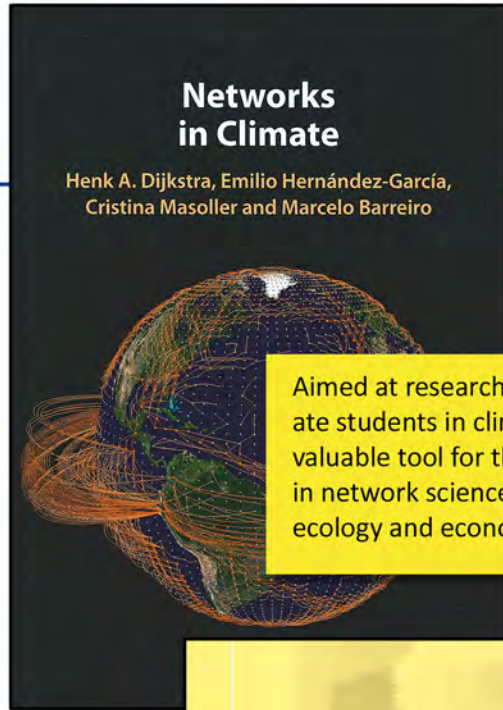


Networks in Climate

Henk A. Dijkstra, Emilio Hernández-García, Cristina Masoller and Marcelo Barreiro



Aimed at researchers and graduate students in climate science, a valuable tool for those interested in network science, biomedicine, ecology and economics.

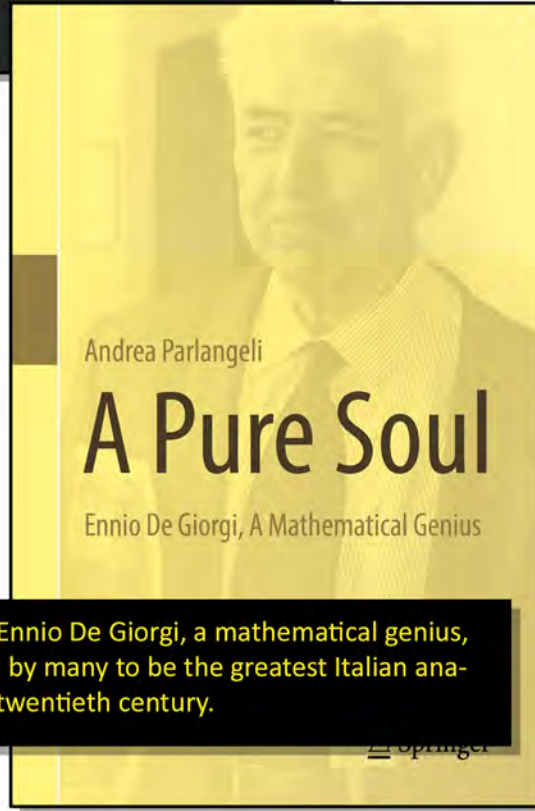


Andrea Parlangeli

A Pure Soul

Ennio De Giorgi, A Mathematical Genius

The life of Ennio De Giorgi, a mathematical genius, considered by many to be the greatest Italian analyst of the twentieth century.



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June 2019 - Other Fields

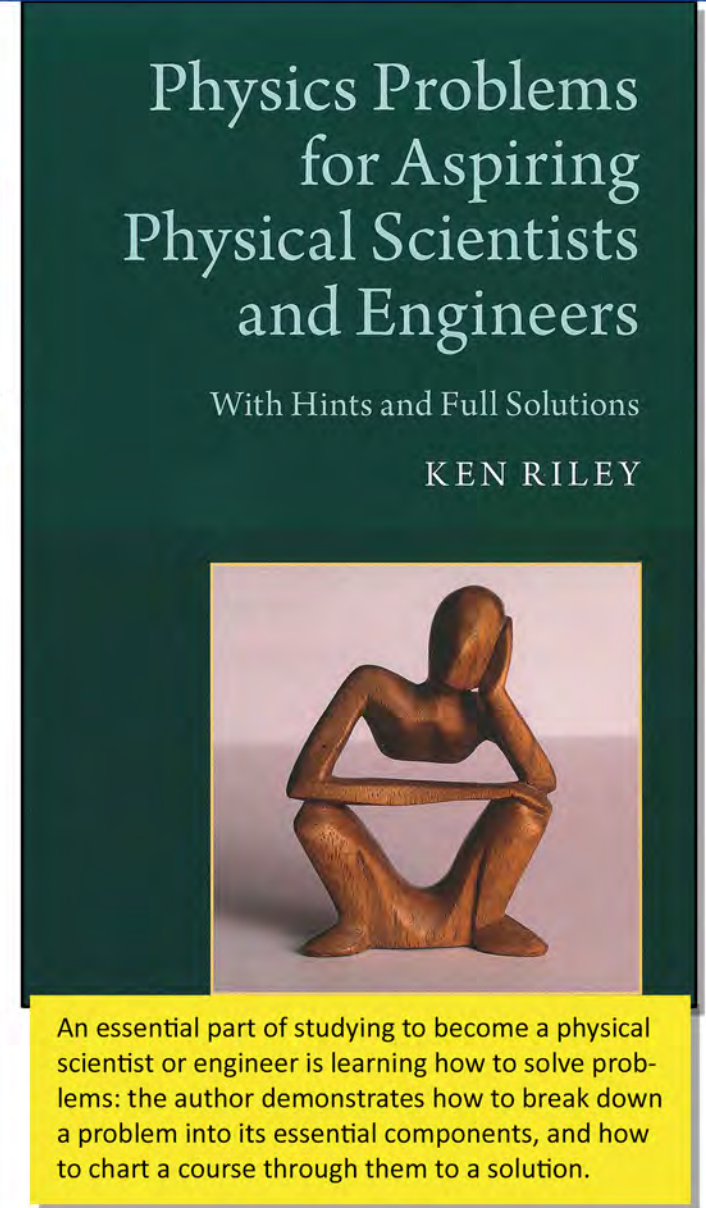
Physics Problems for Aspiring Physical Scientists and Engineers

With Hints and Full Solutions

KEN RILEY



An essential part of studying to become a physical scientist or engineer is learning how to solve problems: the author demonstrates how to break down a problem into its essential components, and how to chart a course through them to a solution.



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