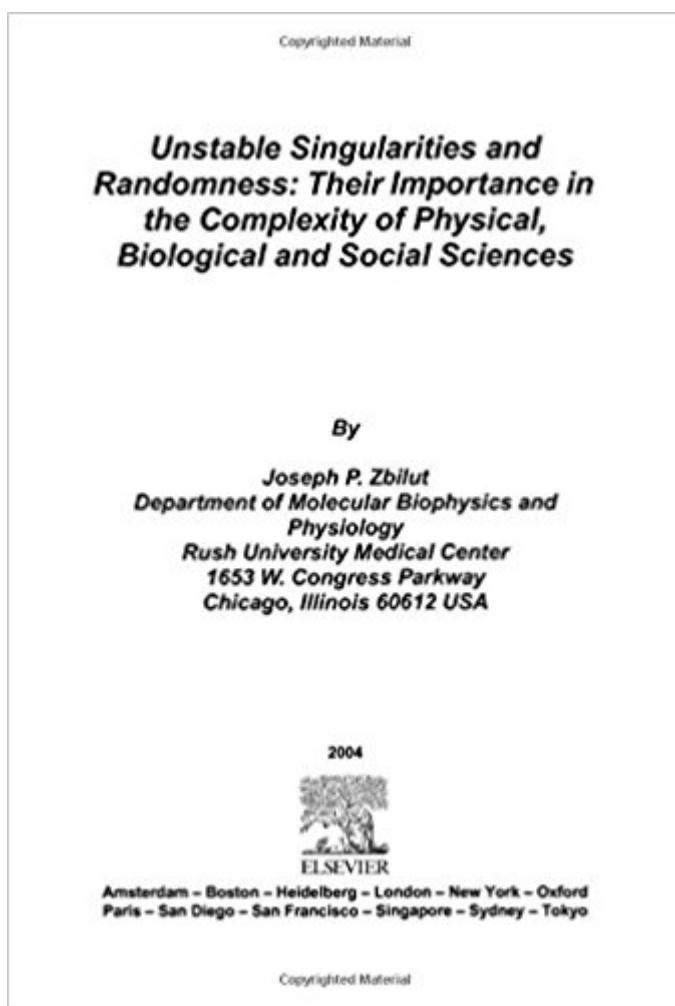


The book was found

Unstable Singularities And Randomness: Their Importance In The Complexity Of Physical, Biological And Social Sciences



Synopsis

Traditionally, randomness and determinism have been viewed as being diametrically opposed, based on the idea that causality and determinism is complicated by “noise.” Although recent research has suggested that noise can have a productive role, it still views noise as a separate entity. This work suggests that this not need to be so. In an informal presentation, instead, the problem is traced to traditional assumptions regarding dynamical equations and their need for unique solutions. If this requirement is relaxed, the equations admit for instability and stochasticity evolving from the dynamics itself. This allows for a decoupling from the “burden” of the past and provides insights into concepts such as predictability, irreversibility, adaptability, creativity and multi-choice behaviour. This reformulation is especially relevant for biological and social sciences whose need for flexibility a propos of environmental demands is important to understand: this suggests that many system models are based on randomness and nondeterminism complicated with a little bit of determinism to ultimately achieve concurrent flexibility and stability. As a result, the statistical perception of reality is seen as being a more productive tool than classical determinism. The book addresses scientists of all disciplines, with special emphasis at making the ideas more accessible to scientists and students not traditionally involved in the formal mathematics of the physical sciences. The implications may be of interest also to specialists in the philosophy of science.

• Presents the ideas in an informal language.

• Provides tools for exploring data for singularities.

Book Information

Hardcover: 252 pages

Publisher: Elsevier Science; 1 edition (July 2, 2004)

Language: English

ISBN-10: 0444516131

ISBN-13: 978-0444516138

Product Dimensions: 6.1 x 0.6 x 9.2 inches

Shipping Weight: 1.2 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #662,907 in Books (See Top 100 in Books) #65 in Books > Science & Math > Mathematics > Applied > Stochastic Modeling #139 in Books > Science & Math > Biological Sciences > Biophysics #443 in Books > Science & Math > Physics > Mathematical Physics

Customer Reviews

"This book is a clear text for understanding unstable singularities and randomness and their importance in the complexity of different application fields." Prof. Nicoletta Sala, University of Lugano in: Chaos and Complexity Letters, No. 4, 2004

Provides examples in physical, biological, social sciences, and the arts.

[Download to continue reading...](#)

Unstable Singularities and Randomness: Their Importance in the Complexity of Physical, Biological and Social Sciences Simply Complexity: A Clear Guide to Complexity Theory Descender Volume 3: Singularities Naturally Occurring Alkaloids and Iridoids: Chemistry and Biological Importance Self-Organization in Biological Systems (Princeton Studies in Complexity) Physical Chemistry: Principles and Applications in Biological Sciences (5th Edition) Physical Chemistry for the Chemical and Biological Sciences Drug Targeting Technology: Physical Chemical Biological Methods (Drugs and the Pharmaceutical Sciences) Physical Chemistry: Principles and Applications in Biological Sciences (4th Edition) Physical Chemistry: Principles and Applications in Biological Sciences Plus MasteringChemistry with Pearson eText -- Access Card Package (5th Edition) The Unstable Shoulder (Ascp Theory and Practice of Cytopathology) Weights on the BOSU® Balance Trainer: Strengthen and Tone All Your Muscles with Unstable Workouts The Unstable Shoulder The Unstable Ankle Mind and Nature: A Necessary Unity (Advances in Systems Theory, Complexity, and the Human Sciences) The New Social Story Book, Revised and Expanded 15th Anniversary Edition: Over 150 Social Stories that Teach Everyday Social Skills to Children and Adults with Autism and their Peers Social Media: Master Social Media Marketing - Facebook, Twitter, Youtube & Instagram (Social Media, Social Media Marketing, Facebook, Twitter, Youtube, Instagram, Pinterest) Social Security & Medicare Facts 2016: Social Security Coverage, Maximization Strategies for Social Security Benefits, Medicare/Medicaid, Social Security Taxes, Retirement & Disability, Ser College Mathematics for Business, Economics, Life Sciences, and Social Sciences (13th Edition) Calculus for Business, Economics, Life Sciences, and Social Sciences (13th Edition)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)