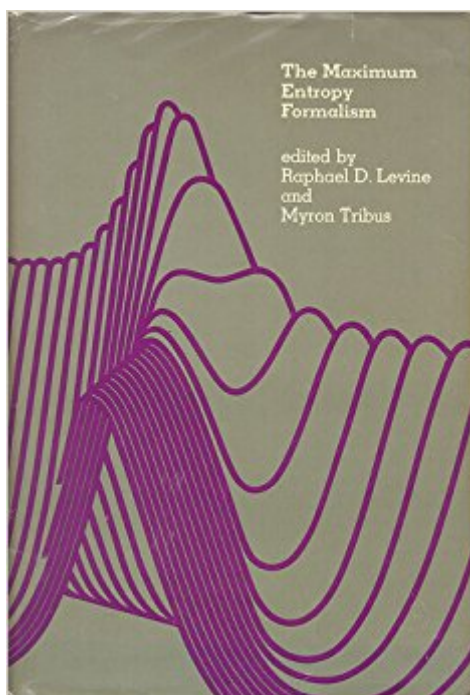


The book was found

Maximum Entropy Formalism



Synopsis

This is the first book to deal specifically and entirely with the maximum entropy formalism, an extremely powerful mathematical technique for the assignment of probability distributions that was originally developed as part of statistical thermodynamics. It is an especially timely review because the formalism has in recent years reached an impressive state of maturity and found application in an increasingly diverse array of fields. Maximum Entropy Formalism brings together sixteen papers that grew out of a conference held at MIT in May 1978. The range and depth of the contributions will make the book useful to an unusually large audience. Chemists, biologists, ecologists, systems engineers and modelers, physicists, and social scientists will find here a comprehensive introduction and guide to the literature and a progress report that provides much new and provocative material on the formalism and its applications. The book is divided roughly into four parts: an overview, statistical mechanics, information theory, and biological systems. It provides both the scope needed to show the central intellectual core of the formalism and the details required by specialists for narrow applications. Three of the major figures in the development of the field—Richard Cox, Walter Elsasser, and Edwin Jaynes—have contributed chapters. The short treatise by Edwin Jaynes is especially noteworthy. In some 100 pages he reviews the development of the principle, considers some of its general properties and answers some criticisms that have been raised, places it in the wider context of statistical decision theory, speculates on future applications and future theoretical developments, and presents details of what is currently the most highly promising application of the principle: the extension of the Gibbs formalism to irreversible processes. Other chapters explore such topics as the growth of information theory; the bases of logic and induction; problems in determining constraints and Lagrange parameters; applications to nonequilibrium systems; "mixing character"; search theory and its relation to information theory; entropy increase and group symmetry; and applications of the formalism to biological systems. Contributors include, in addition to the editors and the authors already noted, N. Agmon, Y. Alhassid, Gregory J. Chaitin, Robert B. Evans, James C. Keck, Edward H. Kerner, Bernard O. Koopman, Rolf Landauer, C. Alden Mead, John G. Pierce, Baldwin Robertson, and Jerome Rothstein.

Book Information

Hardcover: 512 pages

Publisher: The MIT Press; 1st Edition, 2nd Printing edition (December 21, 1978)

Language: English

ISBN-10: 0262120801

ISBN-13: 978-0262120807

Product Dimensions: 6 x 1 x 9 inches

Shipping Weight: 2.2 pounds

Average Customer Review: 5.0 out of 5 stars 1 customer review

Best Sellers Rank: #3,917,109 in Books (See Top 100 in Books) #99 in Books > Science & Math > Physics > Entropy #59604 in Books > Science & Math > Mathematics #339268 in Books > Reference

Customer Reviews

A very useful story about the essence of the universally useful work done by Josiah Willard Gibbs ...

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

Maximum Entropy Formalism Entropy - God's Dice Game: The book describes the historical evolution of the understanding of entropy, alongside biographies of the scientists who ... communication theory, economy, and sociology Exploiting Continuity: Maximum Entropy Estimation of Continuous Distribution (Series on Econometrics and Management Sciences) Maximum Entropy in Action: A Collection of Expository Essays The Maximum Entropy Method (Springer Series in Information Sciences) Maximum Entropy and Ecology: A Theory of Abundance, Distribution, and Energetics (Oxford Series in Ecology and Evolution) Robotic Fish iSplash-MICRO: A 50mm Robotic Fish Generating the Maximum Velocity of Real Fish (High Speed Robotics. Mechanical engineering and kinematics for maximum velocity robot fish. Book 4) Maximum Ride Box Set (Maximum Ride, School's Out Forever, Saving the World) Statistical Mechanics: Entropy, Order Parameters and Complexity (Oxford Master Series in Physics) Entropy Theory in Hydrologic Science and Engineering A Student's Guide to Entropy Entropy, Large Deviations, and Statistical Mechanics (Classics in Mathematics) Entropy: The Truth, the Whole Truth, and Nothing But the Truth Correlations and Entropy in Classical Statistical Mechanics (International series of monographs in natural philosophy) (English and French Edition) Entropy: A New World View Entropy and the Second Law: Interpretation and Misss-Interpretations Entropy Demystified: The Second Law Reduced to Plain Common Sense Complexity, Entropy and the Physics of Information Thermal Physics: Energy and Entropy The Briefest History of Time: The History of Histories of Time and the Misconstrued Association between Entropy and Time

Contact Us

DMCA

Privacy

FAQ & Help