

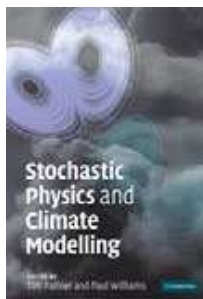
Planetary Tectonics



Authors: Thomas R. Watters, Richard A. Schultz
 Publisher: Cambridge University Press
 ISBN: 9780521765732
 YEAR : 2010
 EDITION : 1st
 PAGES : 518
 PRICE : 90.00 €
 Hardback

This book describes the tectonic landforms resulting from major internal and external forces acting on the outer layers of solid bodies throughout the Solar System. It presents a detailed survey of tectonic structures at a range of length scales found on Mercury, Venus, the Moon, Mars, the outer planet satellites, and asteroids. A diverse range of models for the sources of tectonic stresses acting on silicate and icy crusts is outlined, comparing processes acting throughout the Solar System. Rheological and mechanical properties of planetary crusts and lithospheres are discussed to understand how and why tectonic stresses manifest themselves differently on various bodies. Results from fault population data are assessed in detail. The book provides methods for mapping and analysing planetary tectonic features, and is illustrated with diagrams and spectacular images returned by manned and robotic spacecraft. It forms an essential reference for researchers and students in planetary geology and tectonics.

Stochastic Physics and Climate Modelling



Authors: Tim Palmer and Paul Williams
 Publisher: Cambridge University Press
 ISBN: 9780521761055
 YEAR : 2010
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 PAGES : 480
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This is the first book to promote the use of stochastic, or random, processes to understand, model and predict our climate system. One of the most important applications of this technique is in the representation of comprehensive climate models of processes which, although crucial, are too small or fast to be explicitly modelled. The book shows how stochastic methods can lead to improvements in climate simulation and prediction, compared with more conventional bulk-formula parameterization procedures. Beginning with expositions of the relevant mathematical theory, the book moves on to describe numerous practical applications. It covers the complete range of time scales of climate variability, from seasonal to decadal, centennial, and millennial. With contributions from leading experts in climate physics, this book is invaluable to anyone working on climate models, including graduate students and researchers in the atmospheric and oceanic sciences, numerical weather forecasting, climate prediction, climate modelling and climate change.