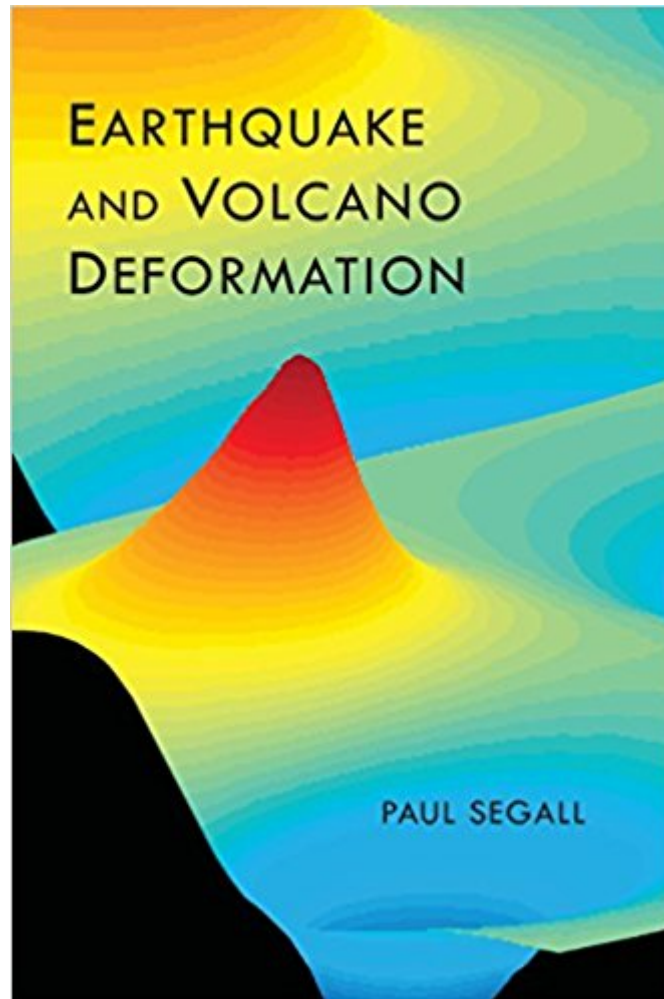


The book was found

Earthquake And Volcano Deformation



Synopsis

Earthquake and Volcano Deformation is the first textbook to present the mechanical models of earthquake and volcanic processes, emphasizing earth-surface deformations that can be compared with observations from Global Positioning System (GPS) receivers, Interferometric Radar (InSAR), and borehole strain- and tiltmeters. Paul Segall provides the physical and mathematical fundamentals for the models used to interpret deformation measurements near active faults and volcanic centers. Segall highlights analytical methods of continuum mechanics applied to problems of active crustal deformation. Topics include elastic dislocation theory in homogeneous and layered half-spaces, crack models of faults and planar intrusions, elastic fields due to pressurized spherical and ellipsoidal magma chambers, time-dependent deformation resulting from faulting in an elastic layer overlying a viscoelastic half-space and related earthquake cycle models, poroelastic effects due to faulting and magma chamber inflation in a fluid-saturated crust, and the effects of gravity on deformation. He also explains changes in the gravitational field due to faulting and magmatic intrusion, effects of irregular surface topography and earth curvature, and modern concepts in rate- and state-dependent fault friction. This textbook presents sample calculations and compares model predictions against field data from seismic and volcanic settings from around the world. Earthquake and Volcano Deformation requires working knowledge of stress and strain, and advanced calculus. It is appropriate for advanced undergraduates and graduate students in geophysics, geology, and engineering. Professors: A supplementary Instructor's Manual is available for this book. It is restricted to teachers using the text in courses. For information on how to obtain a copy, refer to: http://press.princeton.edu/class_use/solutions.html

Book Information

Hardcover: 456 pages

Publisher: Princeton University Press (January 24, 2010)

Language: English

ISBN-10: 0691133026

ISBN-13: 978-0691133027

Product Dimensions: 7 x 1 x 10 inches

Shipping Weight: 2.5 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars Â Â See all reviews Â (1 customer review)

Best Sellers Rank: #1,306,516 in Books (See Top 100 in Books) #178 in Â Books > Science & Math > Earth Sciences > Seismology #275 in Â Books > Science & Math > Earth Sciences >

Customer Reviews

A very well-written book on applications of mechanics of continua to quasistatic Earth deformation problems. Was very useful in my work, both as a reference and a guide to research literature.

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

Earthquake and Volcano Deformation Third Grade Geography: Earthquakes and Volcanoes: Natural Disaster Books for Kids (Children's Earthquake & Volcano Books) Volcanoes & Earthquakes, What & Why? : 2nd Grade Science Series: Second Grade Books (Children's Earthquake & Volcano Books) Image Correlation for Shape, Motion and Deformation Measurements: Basic Concepts, Theory and Applications Strike-Slip Deformation, Basin Formation, and Sedimentation (Special Publication (Society of Economic Paleontologists and Mineralogists)) Deformation and Fracture Mechanics of Engineering Materials Laramide Basement Deformation in the Rocky Mountain Foreland of the Western United States/Book and Maps (Special Paper (Geological Society of America)) Creep of Crystals: High-Temperature Deformation Processes in Metals, Ceramics and Minerals (Cambridge Earth Science Series) Continental Deformation Magic Tree House Boxed Set, Books 13-16: Vacation Under the Volcano, Day of the Dragon King, Viking Ships at Sunrise, and Hour of the Olympics The Last Volcano: A Man, a Romance, and the Quest to Understand Nature's Most Magnificent Fury Mount St. Helens 35th Anniversary Edition: The Eruption and Recovery of a Volcano A Volcano in My Tummy: Helping Children to Handle Anger Haiti's Influence on Antebellum America: Slumbering Volcano in the Caribbean Island on Fire: The Extraordinary Story of a Forgotten Volcano That Changed the World Volcano: The Eruption of Mount St. Helens Super Volcano: The Ticking Time Bomb Beneath Yellowstone National Park Seismic Design and Assessment of Bridges: Inelastic Methods of Analysis and Case Studies: 21 (Geotechnical, Geological and Earthquake Engineering) Wind and Earthquake Resistant Buildings: Structural Analysis and Design (Civil and Environmental Engineering) Matrix Analysis of Structural Dynamics: Applications and Earthquake Engineering (Civil and Environmental Engineering)

[Dmca](#)