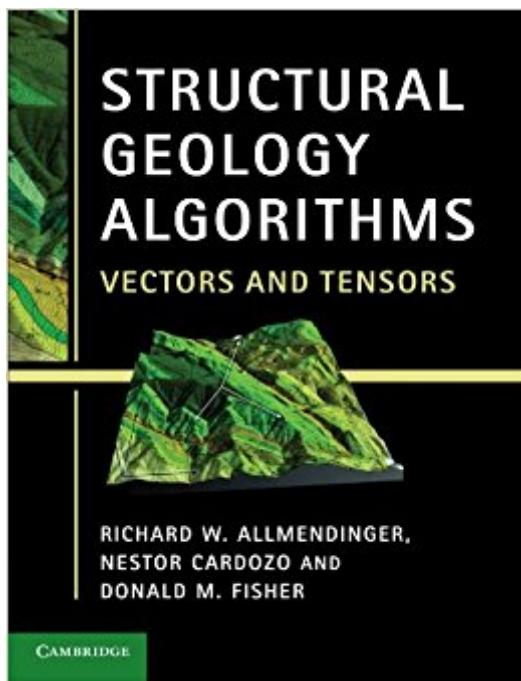The book was found

Structural Geology Algorithms: Vectors And Tensors

Synopsis

State-of-the-art analysis of geological structures has become increasingly quantitative but traditionally, graphical methods are used in teaching. This innovative lab book provides a unified methodology for problem-solving in structural geology using linear algebra and computation. Assuming only limited mathematical training, the book begins with classic orientation problems and progresses to more fundamental topics of stress, strain and error propagation. It introduces linear algebra methods as the foundation for understanding vectors and tensors, and demonstrates the application of geometry and kinematics in geoscience without requiring students to take a supplementary mathematics course. All algorithms are illustrated with a suite of online MATLAB functions, allowing users to modify the code to solve their own structural problems. Containing 20 worked examples and over 60 exercises, this is the ideal lab book for advanced undergraduates or beginning graduate students. It will also provide professional structural geologists with a valuable reference and refresher for calculations.

Book Information

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Customer Reviews

"I highly recommend this book to all structural geology students and practitioners, as well as to earth scientists from a wide range of fields, who will benefit from this clear introduction of the principles and application of linear algebra in the analysis of commonly encountered vector and tensor quantities." Roland BÃ   rgmann, Mathematical Geosciences"The book is suitable for numerate researchers and advanced undergraduates who are reasonably comfortable with mathematics ... it is essential in the twenty-first century that we have numerate geoscientists trained in quantitative

techniques of structural geology ... The authors take care to describe the basics of tensor algebra as well as its application; this book is a solid foundation for understanding the mathematical analysis of how the Earth deforms." John Wheeler, American Mineralogist"I like this book. The material covered, the level of detail and the inclusion of MATLAB scripts make this a timely, relevant and very useful textbook ... [it] will help structural geologists - of all levels - make that critical leap from purely geometrical analyses, through kinematics and into the underlying continuum mechanics of rock deformation. A worthy addition to your bookshelf." Geological Magazine

This innovative lab book provides a unified methodology for problem solving in structural geology using linear algebra and computation. Containing over 60 exercises, and with adaptable MATLAB functions available online, this is the ideal resource for advanced undergraduates or beginning graduate students and a valuable reference for professional structural geologists.

I love my new book. It is good as new and I am glad about that.

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