



Fundamentals of Structural Geology

By David D. Pollard, Raymond C. Fletcher



Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher

Fundamentals of Structural Geology provides a new framework for the investigation of geological structures by integrating field mapping and mechanical analysis. Assuming a basic knowledge of physical geology, introductory calculus and physics, it emphasizes the observational data, modern mapping technology, principles of continuum mechanics, and the mathematical and computational skills, necessary to quantitatively map, describe, model, and explain deformation in Earth's lithosphere. By starting from the fundamental conservation laws of mass and momentum, the constitutive laws of material behavior, and the kinematic relationships for strain and rate of deformation, the authors demonstrate the relevance of solid and fluid mechanics to structural geology. This book offers a modern quantitative approach to structural geology for advanced students and researchers in structural geology and tectonics. It is supported by a website hosting images from the book, additional colour images, student exercises and MATLAB scripts. Solutions to the exercises are available to instructors.

 [Download Fundamentals of Structural Geology ...pdf](#)

 [Read Online Fundamentals of Structural Geology ...pdf](#)

Fundamentals of Structural Geology

By David D. Pollard, Raymond C. Fletcher

Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher

Fundamentals of Structural Geology provides a new framework for the investigation of geological structures by integrating field mapping and mechanical analysis. Assuming a basic knowledge of physical geology, introductory calculus and physics, it emphasizes the observational data, modern mapping technology, principles of continuum mechanics, and the mathematical and computational skills, necessary to quantitatively map, describe, model, and explain deformation in Earth's lithosphere. By starting from the fundamental conservation laws of mass and momentum, the constitutive laws of material behavior, and the kinematic relationships for strain and rate of deformation, the authors demonstrate the relevance of solid and fluid mechanics to structural geology. This book offers a modern quantitative approach to structural geology for advanced students and researchers in structural geology and tectonics. It is supported by a website hosting images from the book, additional colour images, student exercises and MATLAB scripts. Solutions to the exercises are available to instructors.

Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher Bibliography

- Rank: #2481391 in eBooks
- Published on: 2005-09-01
- Released on: 2005-09-01
- Format: Kindle eBook

 [Download Fundamentals of Structural Geology ...pdf](#)

 [Read Online Fundamentals of Structural Geology ...pdf](#)

Download and Read Free Online Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher

Editorial Review

Review

'Pollard and Fletcher have produced an authoritative textbook for 21st Century structural geologists. Fundamentals of Structural Geology comprehensively sets out the mathematics, physics and continuum mechanics that govern the deformation of rocks. This book is excellent value, combining classical and modern science with the authors' own research specialities, to illustrate the application of complete mechanics to structural geology. It will be a 'must' for all geoscientists who wish to model the Earth's deformation.' Sue Treagus, University of Manchester

'This is the best book on structural geology in a long time. In the way that characterizes their research work, Pollard and Fletcher lay out the physical concepts and tools needed to understand the structure-making processes and give many examples of their use. If you have any interest at all in the subject read this book. You'll be glad you did.' Don Ragan, Arizona State University

'This refreshingly quantitative book bridges the gap between higher-level continuum mechanics texts, with little emphasis on earth science problems, and introductory texts in structural geology, traditionally emphasizing observations. The approach taken by Pollard and Fletcher finds a balance between quantitative description and mechanical hypothesis testing. This book deserves a place in the working library of any structural geologist.' David Wiltchko, Texas AM University

'Graduate students and research geologists, in particular, will find it a clear and reliable source of good practice and good sense on quantitative structural geology.' Geological Magazine

'The authors have taken the opportunity to educate using multimedia, and the Website provides a comprehensive addition to the material in the book, including full colour images of the photographs in the text ... the Website is easy to navigate and use and provides further links to useful sources of information. this package provides an ideal method to gain a better understanding of the mechanics of structural geology.' Open University Geological Society Journal

About the Author

David Pollard is the Morris Professor of Earth Sciences at Stanford University.

Raymond Fletcher is a Senior Research Associate in the Department of Geosciences at the Penn State University.

Users Review

From reader reviews:

Christopher Levi:

This Fundamentals of Structural Geology book is simply not ordinary book, you have after that it the world is in your hands. The benefit you get by reading this book is information inside this e-book incredible fresh, you will get data which is getting deeper you read a lot of information you will get. This kind of Fundamentals of Structural Geology without we comprehend teach the one who studying it become critical

in considering and analyzing. Don't become worry Fundamentals of Structural Geology can bring if you are and not make your bag space or bookshelves' grow to be full because you can have it with your lovely laptop even telephone. This Fundamentals of Structural Geology having great arrangement in word in addition to layout, so you will not truly feel uninterested in reading.

Tony Valdez:

Information is provisions for those to get better life, information presently can get by anyone in everywhere. The information can be a understanding or any news even a problem. What people must be consider if those information which is inside the former life are difficult to be find than now could be taking seriously which one would work to believe or which one often the resource are convinced. If you receive the unstable resource then you understand it as your main information we will see huge disadvantage for you. All those possibilities will not happen throughout you if you take Fundamentals of Structural Geology as the daily resource information.

Beth Johnson:

As we know that book is very important thing to add our knowledge for everything. By a guide we can know everything you want. A book is a set of written, printed, illustrated or maybe blank sheet. Every year was exactly added. This reserve Fundamentals of Structural Geology was filled in relation to science. Spend your spare time to add your knowledge about your science competence. Some people has distinct feel when they reading any book. If you know how big benefit from a book, you can sense enjoy to read a reserve. In the modern era like today, many ways to get book that you wanted.

Eliza Gold:

A lot of people said that they feel weary when they reading a reserve. They are directly felt that when they get a half areas of the book. You can choose typically the book Fundamentals of Structural Geology to make your current reading is interesting. Your skill of reading expertise is developing when you similar to reading. Try to choose easy book to make you enjoy to see it and mingle the idea about book and studying especially. It is to be first opinion for you to like to open a book and examine it. Beside that the book Fundamentals of Structural Geology can to be your brand-new friend when you're feel alone and confuse in doing what must you're doing of this time.

Download and Read Online Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher #VOJ05FLQGMC

Read Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher for online ebook

Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher books to read online.

Online Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher ebook PDF download

Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher Doc

Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher Mobipocket

Fundamentals of Structural Geology By David D. Pollard, Raymond C. Fletcher EPub