



An Integrated Framework for Structural Geology: Kinematics, Dynamics, and Rheology of Deformed Rocks

Steven Wojtal, Tom Blenkinsop, Basil Tikoff

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DESCRIPTION

A modern and practice-oriented approach to structural geology

In *Structural Geology # An Integrated Framework: Kinematics, Dynamics, and Rheology of Deformed Rocks*, three experienced geologists deliver a comprehensive exploration of the core principles of rock deformation. The text offers a quantitative foundation for three-dimensional rock geometry, its kinematic evolution, deformation dynamics, and explains the rheology of geological materials.

The authors have been careful to separate observations from the inferences drawn based on those observations and follow the scientific methodology used by practitioners of structural geology. They've also included two, fully worked out practical examples of structural geology field observation and laboratory analysis, as well as hundreds of detailed, two-color illustrations including many microstructural photographs.

Readers will also find:

- A thorough introduction to structural geology, including empirical and theoretical approaches, as well as continuum mechanics and its applications to structural geology
- In-depth treatments of structures produced by deformation, microstructures, and displacements
- Comprehensive explorations of strain, stress, and deformation mechanisms
- Illuminating case studies of rock deformation and rheology

Written for graduate and advanced undergraduate students in geology, *Structural Geology # An Integrated Framework* will also earn a place in the libraries of practicing geologists with an interest in a one-stop resource on structural geology.

ABOUT THE AUTHOR

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FEATURES

- * Modern approach to structural geology that teaches not only what we know but also how structural geologists think and work
 - * Turns structural geology into a quantitative science by introducing kinematics, dynamics and rheology of rocks
 - * Includes two fully worked out practical examples of structural geology field observation and laboratory analysis
 - * Richly illustrated with hundreds of two-color images, including many microstructural photographs
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