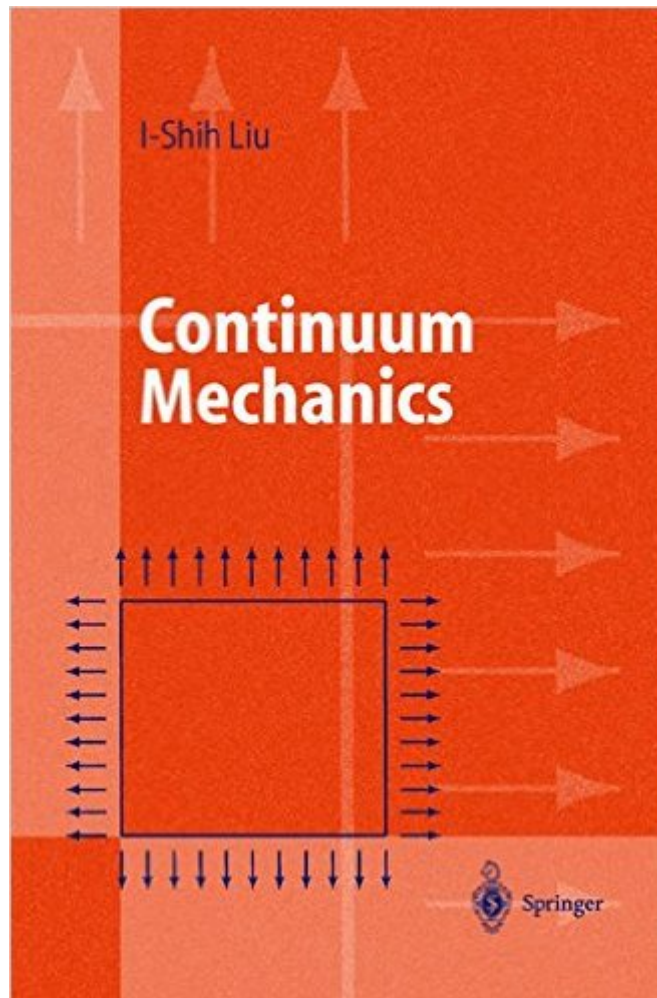


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Continuum Mechanics



Synopsis

This concise textbook develops step by step the fundamental principles of continuum mechanics. Emphasis is on mathematical clarity, and an extended appendix provides the required background knowledge in linear algebra and tensor calculus. After introducing the basic notions about general kinematics, balance equations, material objectivity and constitutive functions, the book turns to the presentation of rational thermodynamics by stressing the role of Lagrange multipliers in deriving constitutive functions from the underlying entropy principle. A brief lecture on extended thermodynamics closes the book. Many examples and exercises round off the material presented in the chapters. The book addresses primarily advanced undergraduate students in theoretical physics, applied mathematics and materials sciences.

Book Information

Series: Advanced Texts in Physics

Hardcover: 298 pages

Publisher: Springer; 2002 edition (August 5, 2002)

Language: English

ISBN-10: 3540430199

ISBN-13: 978-3540430193

Product Dimensions: 6.1 x 0.8 x 9.2 inches

Shipping Weight: 1.3 pounds (View shipping rates and policies)

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Customer Reviews

This book is very concise but goes into some details that other continuum mechanics books don't, e.g. representations of tensor functions, material symmetry, a bunch of thermodynamics which I haven't seen before, maybe I'll understand it eventually. The notation is consistent with modern non-linear cont. mechanics so is nice from that end (direct notation). Not appropriate for a first introduction though be warned. Nice, unique appendices on the normal things e.g. linear algebra/tensor calculus. 4.5 stars if the option were there, I rounded down since it's so curt. Highly recommend.

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