



Topics in Nonlinear Physics

By N. J. Zabusky

Springer Mai 2012, 2012. Taschenbuch. Book Condition: Neu. 279x210x40 mm. This item is printed on demand - Print on Demand Neuware - InhaltsangabeNonlinear Problems in Physics.- Nonlinear Problems in Physics.- The Nonlinear Field Theories in Mechanics.- 1. Thermodynamics of Homogeneous Processes.- Temperature and Heat.- Homogeneous Processes.- The Thermodynamic State.- Thermodynamic Processes.- Histories.- Thermodynamic Constitutive Equations.- Example 1. The Classical Caloric Equations of State.- 2. Kinematics. Changes of Frame.- Geometry.- Primitive Elements of Thermomechanics.- Bodies, Configurations, Motions.- Mass Density.- Reference Configuration.- Deformation Gradient.- Change of Reference Configuration.- Current Configuration as Reference.- Stretch and Rotation.- Stretching and Spin.- Changes of Frame.- 3. Force and Work, Laws of Motion.- Physical Principles of Mechanics.- Forces and Moments in Continuum Mechanics.- Momentum and Moment of Momentum.- The Euler-Cauchy Stress Principle.- Energy and Heat Work.- Equations of Balance.- Differential Equations of Continuum Mechanics.- 4. Constitutive Equations. Simple Materials.- Nature of Constitutive Equations.- Equivalent Processes.- Constitutive Equations.- Axioms for Constitutive Equations.- Simple Materials.- Exercise 4.1 (Zaremba-Noll Theorem).- Reduction for Material Frame-Indifference.- Internal Constraints.- 5. The Isotropy Group.- Isotropy Group.- Orthogonal Part of the Isotropy Group.- Change of Reference Configuration.- 6. Solids, Isotropic Materials, Fluids, Fluid Crystals.- Main Properties of the Isotropy Group.- Isotropic Materials.- Solids.- Fluids.- Fluid...

Reviews

This publication is definitely worth buying. It can be loaded with wisdom and knowledge I am easily could possibly get a satisfaction of looking at a composed publication.

-- **Rhiannon Steuber**

Very helpful to all type of individuals. It really is rally interesting throgh looking at time. Its been designed in an extremely basic way which is just soon after i finished reading this pdf through which basically modified me, change the way i believe.

-- **Tyshawn Brekke**