



Similarity and Symmetry Methods [Applications in Elasticity and Mechanics of Materials /

Ganghoffer, Jean-François,

ed. lit

Mladenov, Ivaïlo,

ed. lit

Springer International Publishing,

2014

Mechanics

Mechanics, Applied

Computer science

Solid Mechanics

Classical Mechanics

Computational Science and Engineering

Monografía

The principle aim of the book is to present a self-contained, modern account of similarity and symmetry methods, which are important mathematical tools for both physicists, engineers and applied mathematicians. The idea is to provide a balanced presentation of the mathematical techniques and applications of symmetry methods in mathematics, physics and engineering. That is why it includes recent developments and many examples in finding systematically conservation laws, local and nonlocal symmetries for ordinary and partial differential equations. The role of continuous symmetries in classical and quantum field theories is exposed at a technical level accessible even for non specialists. The importance of symmetries in continuum mechanics and mechanics of materials is highlighted through recent developments, such as the construction of constitutive models for various materials combining Lie symmetries with experimental data. As a whole this book is a unique collection of contributions from experts in the field, including specialists in the mathematical treatment of symmetries, researchers using symmetries from a fundamental, applied or numerical viewpoint. The book is a fascinating overview of symmetry methods aimed for graduate students in physics, mathematics and engineering, as well as researchers either willing to enter in the field or to capture recent developments and applications of symmetry methods in different scientific fields

<https://rebiunoda.pro.baratznet.cloud:38443/OpacDiscovery/public/catalog/detail/b2FpOmNlbgVlcmF0aW9uOmVzLmJhcmF0ei5yZW4vMzY0MDE1NjU>

Título: Similarity and Symmetry Methods [Recurso electrónico] Applications in Elasticity and Mechanics of Materials edited by Jean-François Ganghoffer, Ivaïlo Mladenov

Editorial: Cham Springer International Publishing Imprint: Springer 2014

Editorial: Cham Springer International Publishing 2014

Descripción física: VII, 376 p. 28 il., 1 il. col

Mención de serie: Lecture Notes in Applied and Computational Mechanics 73

Nota general: Description based upon print version of record

Bibliografía: Includes bibliographical references at the end of each chapters

Contenido: Some Recent Developments in Finding Systematically Conservation Laws and Nonlocal Symmetries for Partial Differential Equations -- Construction of Conservation Laws Using Symmetries -- Symbolic Computation Of Nonlocal Symmetries And Nonlocal Conservation Laws Of Partial Differential Equations Using The Gem Package For Maple -- Symmetries of Hamiltonian Systems on Symplectic and Poisson Manifolds -- Symmetries in Mechanics: From Field Theories to Master Responses in the Constitutive Modeling of Materials -- Symmetries and Some Special Solutions of the Helfrich Model -- Lie Group Analysis of the Willmore and Membrane Shape Equations

Lengua: English

ISBN: 9783319082967 9783319082974 9783319082950 9783319378510

Materia: Mechanics Mechanics, Applied Computer science Solid Mechanics. Classical Mechanics. Computational Science and Engineering.

Autores: Ganghoffer, Jean-François, ed. lit Mladenov, Ivailo, ed. lit

Enlace a formato físico adicional: 3-319-08295-7

Punto acceso adicional serie-Título: Lecture Notes in Applied and Computational Mechanics, 73

Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es