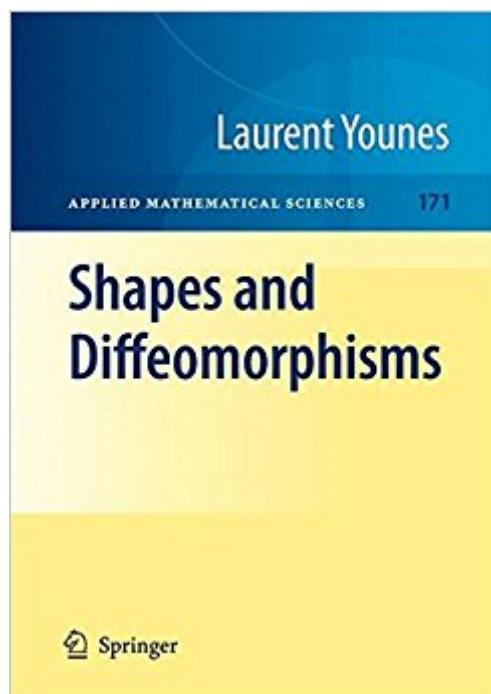


The book was found

Shapes And Diffeomorphisms (Applied Mathematical Sciences, Vol. 171)



Synopsis

Shapes are complex objects to apprehend, as mathematical entities, in terms that also are suitable for computerized analysis and interpretation. This volume provides the background that is required for this purpose, including different approaches that can be used to model shapes, and algorithms that are available to analyze them. It explores, in particular, the interesting connections between shapes and the objects that naturally act on them, diffeomorphisms. The book is, as far as possible, self-contained, with an appendix that describes a series of classical topics in mathematics (Hilbert spaces, differential equations, Riemannian manifolds) and sections that represent the state of the art in the analysis of shapes and their deformations. A direct application of what is presented in the book is a branch of the computerized analysis of medical images, called computational anatomy.

Book Information

Hardcover: 438 pages

Publisher: Springer; 1st edition (April 24, 2010)

Language: English

ISBN-10: 3642120547

ISBN-13: 978-3642120541

Product Dimensions: 6.2 x 1.1 x 9.5 inches

Shipping Weight: 1.7 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars 1 customer review

Best Sellers Rank: #779,386 in Books (See Top 100 in Books) #100 in Books > Science & Math > Mathematics > Geometry & Topology > Differential Geometry #111 in Books > Science & Math > Mathematics > Applied > Graph Theory #467 in Books > Textbooks > Science & Mathematics > Mathematics > Geometry

Customer Reviews

From the reviews:
"The book under review deals with the fascinating subject of shapes. This is a book on applied mathematics which provides a description of the wide range of methods that have been invented to represent, detect, or compare shapes together with the necessary mathematical background that they require. The book could also be of interest to an engineering- or computer-science-oriented reader, as it gives in several places concrete algorithms and applicable methods, including experimental illustrations." (Luca Granieri, Mathematical Reviews, Issue 2011 h)
"This book is an attempt at providing a description of a large range of methods used to represent, detect and compare shapes together with the mathematical

background that they require. This book on applied mathematics is of interest to engineers and computer scientists having direct applications in the computerized analysis of medical images. This theory will as well lead to other interesting applications in the future. (Corina Mohorianu, Zentralblatt MATH, Vol. 1205, 2011)

Shapes are complex objects, which are difficult to apprehend as mathematical entities, in ways that can also be amenable to computerized analysis and interpretation. This volume provides the background that is required for this purpose, including different approaches that can be used to model shapes, and algorithms that are available to analyze them. It explores, in particular, the interesting connections between shapes and the objects that naturally act on them, diffeomorphisms. The book is, as far as possible, self-contained, with an appendix that describes a series of classical topics in mathematics (Hilbert spaces, differential equations, Riemannian manifolds) and sections that represent the state of the art in the analysis of shapes and their deformations. A direct application of what is presented in the book is a branch of the computerized analysis of medical images, called computational anatomy.

This is a must have book for those who need to have a solid mathematical foundation for large deformation shape analysis.

[Download to continue reading...](#)

Shapes and Diffeomorphisms (Applied Mathematical Sciences, Vol. 171) Applied Functional Analysis: Applications to Mathematical Physics (Applied Mathematical Sciences) (v. 108) Shapes, Shapes, Shapes Mathematical Problems from Combustion Theory (Applied Mathematical Sciences) (v. 83) Applied Functional Analysis: Main Principles and Their Applications (Applied Mathematical Sciences) Simple Mathematical Models of Gene Regulatory Dynamics (Lecture Notes on Mathematical Modelling in the Life Sciences) Inverse Acoustic and Electromagnetic Scattering Theory (Applied Mathematical Sciences) Principles of Mathematical Analysis (International Series in Pure and Applied Mathematics) (International Series in Pure & Applied Mathematics) Computational Homology (Applied Mathematical Sciences) Topological Methods in Hydrodynamics (Applied Mathematical Sciences) Drawing: Drawing and Sketching,Doodling,Shapes,Patterns,Pictures and Zen Doodle (drawing, zentangle, drawing patterns, drawing shapes, how to draw, doodle, creativity) Shapes: An Adult Coloring Book: Over 40 Fun Stress Relief Shapes and Geometric Patterns for Your Inner Artist Let's Grill! Best BBQ Recipes Box Set: Best BBQ Recipes from Texas (vol.1), Carolinas (Vol. 2), Missouri (Vol. 3), Tennessee (Vol. 4), Alabama (Vol. 5), Hawaii (Vol. 6)

Interaction of the Rocky Mountain Foreland and the Cordilleran Thrust Belt (Geological Society of America Memoir 171) - with maps Cardiff and Newport, Pontypool (Landranger Maps) 171 (OS Landranger Map) Dot-to-Dot Landmarks for Adults: Puzzles from 171 to 889 dots (Dot to Dot Books For Adults) (Volume 2) Controlling Garden Weeds: Storey's Country Wisdom Bulletin A-171 (Storey Country Wisdom Bulletin) The Walking Dead #171 The First Hollywood Musicals: A Critical Filmography of 171 Features, 1927-1932 ORDNANCE SURVEY Landranger Active 171 Cardiff & Newport, Pontypool Map With Digital Version

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)