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Titolo	Research in Shape Modeling : Los Angeles, July 2013 / / edited by Kathryn Leonard, Sibel Tari
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ISBN	3-319-16348-5
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (161 p.)
Collana	Association for Women in Mathematics Series, , 2364-5741 ; ; 1
Disciplina	003.3 004 004.0151 510 570.285
Soggetti	Information visualization Computer science - Mathematics Biomathematics Mathematical models Data and Information Visualization Mathematical Applications in Computer Science Mathematical and Computational Biology Mathematical Modeling and Industrial Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Automatic prior shape selection for image segmentation -- A scalable fluctuating distance field: an application to tumor shape analysis -- Part-aware distance fields for easy inbetweening in arbitrary dimensions -- A biomechanical model of cortical folding -- Quantification and visualization of variation in anatomical trees -- Skeleton-based recognition of shapes in images via longest path matching -- Revisiting skeletons from natural images.-Towards automated filtering or the medial axis using the scale axis transform -- Identifying perceptually salient features on 2D shapes.
Sommario/riassunto	Presenting the latest research from the growing field of mathematical

shape analysis, this volume is comprised of the collaborations of participants of the Women in Shape Modeling (WiSh) workshop, held at UCLA's Institute for Pure and Applied Mathematics in July 2013. Topics include: Simultaneous spectral and spatial analysis of shape Dimensionality reduction and visualization of data in tree-spaces, such as classes of anatomical trees like airways and blood vessels Geometric shape segmentation, exploring shape segmentation from a Gestalt perspective, using information from the Blum medial axis of edge fragments in an image Representing and editing self-similar details on 3D shapes, studying shape deformation and editing techniques Several chapters in the book directly address the problem of continuous measures of context-dependent nearness and right shape models. Medical and biological applications have been a major source of motivation in shape research, and key topics are examined here in detail. All together, the chapters in the book cover an entire spectrum in shape analysis starting from raw images and ending with shape-related decisions.