1.	Record Nr.	UNISA996465744403316
	Titolo	Advances in Geometric Modeling and Processing [[electronic resource]] : 5th International Conference,GMP 2008, Hangzhou, China, April 23-25, 2008, Proceedings / / edited by Falai Chen, Bert Jüttler
	Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2008
	ISBN	3-540-79246-5
	Edizione	[1st ed. 2008.]
	Descrizione fisica	1 online resource (XV, 606 p.)
	Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 4975
	Classificazione	DAT 756f SS 4800
	Disciplina	004
	Soggetti	Image processing—Digital techniques Computer vision Computer graphics Computer simulation Machine theory Pattern recognition systems Computer science—Mathematics Discrete mathematics Computer Imaging, Vision, Pattern Recognition and Graphics Computer Graphics Computer Modelling Formal Languages and Automata Theory Automated Pattern Recognition Discrete Mathematics in Computer Science
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Includes index.
	Nota di contenuto	RegularPapers -- Automatic PolyCube-Maps -- Bicubic G1 Interpolation of Irregular Quad Meshes Using a 4-Split -- Bounding the Distance between a Loop Subdivision Surface and Its Limit Mesh -- A Carving Framework for Topology Simplification of Polygonal Meshes -- Comparing Small Visual Differences between Conforming Meshes -- Continuous Collision Detection between Two 2D Curved-Edge Polygons

under Rational Motions -- Controlling Torsion Sign -- Cutting and Fracturing Models without Remeshing -- Detection of Planar Regions in Volume Data for Topology Optimization -- Determining Directional Contact Range of Two Convex Polyhedra -- Efficient Collision Detection Using a Dual Bounding Volume Hierarchy -- Fast and Local Fairing of B-Spline Curves and Surfaces -- Finite Element Methods for Geometric Modeling and Processing Using General Fourth Order Geometric Flows -- Geodesic as Limit of Geodesics on PL-Surfaces -- Hausdorff and Minimal Distances between Parametric Freeforms in and -- On Interpolation by Spline Curves with Shape Parameters -- Lepp Terminal Centroid Method for Quality Triangulation: A Study on a New Algorithm -- Mean Value Bézier Maps -- Meaningful Mesh Segmentation Guided by the 3D Short-Cut Rule -- Mesh Simplification with Vertex Color -- A Multistep Approach to Restoration of Locally Undersampled Meshes -- Noise Removal Based on the Variation of Digitized Energy -- Note on Industrial Applications of Hu's Surface Extension Algorithm -- Parameterizing Marching Cubes Isosurfaces with Natural Neighbor Coordinates -- Parametric Polynomial Minimal Surfaces of Degree Six with Isothermal Parameter -- Physically-Based Surface Texture Synthesis Using a Coupled Finite Element System -- Planar Shape Matching and Feature Extraction Using Shape Profile -- Reconstructing a Mesh from a Point Cloud by Using a Moving Parabolic Approximation -- A Revisit to Least Squares Orthogonal Distance Fitting of Parametric Curves and Surfaces -- Shifting Planes to Follow a Surface of Revolution -- Slit Map: Conformal Parameterization for Multiply Connected Surfaces -- Solving Systems of 3D Geometric Constraints with Non-rigid Clusters -- Space-Time Curve Analogies for Motion Editing -- Variational Skinning of an Ordered Set of Discrete 2D Balls -- Short Papers -- 3D Mesh Segmentation Using Mean-Shifted Curvature -- Convex Surface Interpolation -- Deformation and Smooth Joining of Mesh Models for Cardiac Surgical Simulation -- Digital Design for Functionally Graded Material Components Rapid Prototyping Manufacturing -- Layer-Based Mannequin Reconstruction and Parameterization from 3D Range Data -- Manifoldization of ?-Shapes by Topology Operators -- A Mesh Simplification Method Using Noble Optimal Positioning -- Narrow-Band Based Radial Basis Functions Implicit Surface Reconstruction -- Progressive Interpolation Using Loop Subdivision Surfaces -- Protein Surface Modeling Using Active Contour Model -- Quasi-interpolation for Data Fitting by the Radial Basis Functions -- A Shape Feature Based Simplification Method for Deforming Meshes -- Shape Representation and Invariant Description of Protein Tertiary Structure in Applications to Shape Retrieval and Classification -- The Structure of V-System over Triangulated Domains -- Tool Path Planning for 5-Axis Flank Milling Based on Dynamic Programming Techniques -- Trimming Bézier Surfaces on Bézier Surfaces Via Blossoming -- A Volumetric Framework for the Modeling and Rendering of Dynamic and Heterogeneous Scenes -- Geometric Calibration of Projector Imagery on Curved Screen Based-on Subdivision Mesh -- A Comment -- A Comment on 'Constructing Regularity Feature Trees for Solid Models'.

| Sommario/riassunto | This book constitutes the refereed proceedings of the 5th International Conference on Geometric Modeling and Processing, GMP 2008, held in Hangzhou, China, in April 2008. The 34 revised full papers and 17 revised short papers presented were carefully reviewed and selected from a total of 113 submissions. The papers cover a wide spectrum in the area of geometric modeling and processing and address topics such as curves and surfaces, digital geometry processing, geometric feature modeling and recognition, geometric constraint solving, |

geometric optimization, multiresolution modeling, and applications in computer vision, image processing, scientific visualization, robotics and reverse engineering.