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Titolo	Active Visual Inference of Surface Shape [[electronic resource] /] / by Roberto Cipolla
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1996
ISBN	3-540-48522-8
Edizione	[1st ed. 1996.]
Descrizione fisica	1 online resource (XII, 196 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 1016
Disciplina	006.4/2
Soggetti	Computer mathematics Differential geometry Computer simulation Optical data processing Artificial intelligence Pattern recognition Computational Mathematics and Numerical Analysis Differential Geometry Simulation and Modeling Image Processing and Computer Vision Artificial Intelligence Pattern Recognition
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Surface shape from the deformation of apparent contours -- Deformation of apparent contours — Implementation -- Qualitative shape from images of surface curves -- Orientation and time to contact from image divergence and deformation -- Conclusions.
Sommario/riassunto	This monograph is devoted to the problem of inferring geometric information about arbitrarily curved surfaces from visual cues; this is a central problem in computer vision with immediate relevance for robot manipulation and navigation. The author develops computational theories and techniques relating visual information arising from viewer movements to the differential geometry of visible surfaces. The

theories developed have been implemented and tested using a real-time tracking system based on deformable contours. Applications of the techniques to geometric modelling, obstacle avoidance, navigation, and object manipulation are presented.
