1.	Record Nr.	UNINA9910815492403321
	Titolo	Human symmetry perception and its computational analysis / / editor, C.W. Tyler
	Pubbl/distr/stampa	Mahwah, N.J., : Lawrence Erlbaum Associates, 2002
	ISBN	1-135-62876-9 1-282-32652-X 9786612326523 1-4106-0660-0
	Edizione	[1st ed.]
	Descrizione fisica	1 online resource (401 p.)
	Altri autori (Persone)	TylerChristopher W
	Disciplina	153.750285
	Soggetti	Visual perception Symmetry
	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	Book Cover; Title; Copyright; Contents; INTRODUCTION; Human symmetry perception; Part One: EMPIRICAL EVALUATION OF SYMMETRY PERCEPTION; Detection of visual symmetries; The role of pattern outline in bilateral symmetry detection with briefly flashed dot patterns; Detection and identification of mirror-image letter pairs in central and peripheral vision; Evidence for the use of scene-based frames of reference in two-dimensional shape recognition; Independence of bilateral symmetry detection from a gravitational reference frame Level of processing in the perception of symmetrical forms viewed from different anglesDeterminants of symmetry perception; Mirror symmetry detection: predominance of secondorder pattern processing throughout the visual field; Human discrimination of surface slant in fractal and related textured images; Part Two: THEORETICAL ISSUES IN SYMMETRY ANALYSIS; Detection of bilateral symmetry using spatial filters; Modelling symmetry detection with backpropagation networks; A network model for generating differential symmetry axes of shapes via receptive fields On the generalization of symmetry relations in visual pattern classificationA model for global symmetry detection in dense images;

	Continuous symmetry: a model for human figural perception; Quantification of local symmetry: application to texture discrimination; A continuum of non-Gaussian self-similar image ensembles with white power spectra; Symmetry as a depth cue; Symmetric 3D objects are an easy case for 2D object recognition; Mirror symmetry and parallelism: two opposite rules for the identity transform in space perception and their unified treatment by the Great Circle Model The generalized cone in human spatial organization
Sommario/riassunto	Symmetry is a fundamental principle of broad concern from the physical sciences to art and design. Much of its significance derives from the perceptual appeal of symmetry to the human brain, as testified by its universal inclusion in those icons of decororiental rugs. Although there have been many books on physical symmetry, none have addressed the issue of human symmetry perception. This comprehensive collection provides a wide range of approaches to the study of how we see symmetries, from evolutionary through empirical to extended theoretical treatments. The book is an invaluable resource