

1. Record Nr.	UNINA9910483618103321
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Titolo	Spherical harmonics and approximations on the unit sphere : an introduction / / Kendall Atkinson, Weimin Han
Pubbl/distr/stampa	Berlin ; ; New York, : Springer, c2012
ISBN	9783642259838 3642259839
Edizione	[1st ed. 2012.]
Descrizione fisica	1 online resource (IX, 244 p. 19 illus., 11 illus. in color.)
Collana	Lecture notes in mathematics, , 0075-8434 ; ; 2044
Altri autori (Persone)	HanWeimin
Disciplina	515/.53
Soggetti	Spherical harmonics Spherical functions
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Preliminaries -- 2 Spherical Harmonics -- 3 Differentiation and Integration over the Sphere -- 4 Approximation Theory -- 5 Numerical Quadrature -- 6 Applications: Spectral Methods.
Sommario/riassunto	These notes provide an introduction to the theory of spherical harmonics in an arbitrary dimension as well as an overview of classical and recent results on some aspects of the approximation of functions by spherical polynomials and numerical integration over the unit sphere. The notes are intended for graduate students in the mathematical sciences and researchers who are interested in solving problems involving partial differential and integral equations on the unit sphere, especially on the unit sphere in three-dimensional Euclidean space. Some related work for approximation on the unit disk in the plane is also briefly discussed, with results being generalizable to the unit ball in more dimensions.