Record Nr. UNINA9910817629303321 Autore Macdonald I. G (lan Grant) Titolo Affine Hecke algebras and orthogonal polynomials / / I.G. Macdoald Cambridge, UK;; New York,: Cambridge University Press, 2003 Pubbl/distr/stampa **ISBN** 1-107-13745-4 1-280-43672-7 9786610436729 0-511-17917-0 1-139-14905-9 0-511-05602-8 0-511-30622-9 0-511-54282-8 0-511-07081-0 Edizione [1st ed.] Descrizione fisica 1 online resource (ix, 175 pages) : digital, PDF file(s) Collana Cambridge tracts in mathematics;; 157 Disciplina 512/.55 Soggetti Hecke algebras Orthogonal polynomials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Title from publisher's bibliographic system (viewed on 05 Oct 2015). Includes bibliographical references (p. 170-172) and index. Nota di bibliografia Introduction -- Affine root systems -- The extended affine Weyl group Nota di contenuto -- The braid group -- The affine Hecke algebra -- Orthogonal polynomials -- The rank 1 case -- Bibliography -- Index. In recent years there has developed a satisfactory and coherent theory Sommario/riassunto of orthogonal polynomials in several variables, attached to root systems, and depending on two or more parameters. These polynomials include as special cases: symmetric functions; zonal spherical functions on real and p-adic reductive Lie groups; the Jacobi polynomials of Heckman and Opdam; and the Askey-Wilson polynomials, which themselves include as special or limiting cases all the classical families of orthogonal polynomials in one variable. This book, first published in 2003, is a comprehensive and organised account of the subject aims to provide a unified foundation for this

theory, to which the author has been a principal contributor. It is an

essentially self-contained treatment, accessible to graduate students familiar with root systems and Weyl groups. The first four chapters are preparatory to Chapter V, which is the heart of the book and contains all the main results in full generality.