Record Nr. UNINA9910965251603321 Autore Faraut Jacques <1940-> **Titolo** Analysis on Lie groups: an introduction / / Jacques Faraut Cambridge, UK;; New York,: Cambridge University Press, 2008 Pubbl/distr/stampa **ISBN** 9786611775537 9781107173989 1107173981 9781281775535 1281775533 9780511423505 0511423500 9780511422300 051142230X 9780511423987 0511423985 9780511421648 0511421648 9780511755170 0511755171 9780511422966 0511422962 Edizione [1st ed.] 1 online resource (x, 302 pages) : digital, PDF file(s) Descrizione fisica Cambridge studies in advanced mathematics;; 110 Collana Disciplina 512/.482 Soggetti Lie groups Lie algebras Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Title from publisher's bibliographic system (viewed on 05 Oct 2015). Note generali

Includes bibliographical references (p. 299-300) and index.

the spaces of symmetric and Hermitian matrices -- Irreducible

The linear group -- The exponential map -- Linear Lie groups -- Lie algebras -- Haar measure -- Representations of compact groups --

The groups SU(2) and SO(3), Haar measure -- Analysis on the group SU (2) -- Analysis on the sphere and the Euclidean space -- Analysis on

Nota di bibliografia

Nota di contenuto

representations of the unitary group -- Analysis on the unitary group.

Sommario/riassunto

The subject of analysis on Lie groups comprises an eclectic group of topics which can be treated from many different perspectives. This self-contained text concentrates on the perspective of analysis, to the topics and methods of non-commutative harmonic analysis, assuming only elementary knowledge of linear algebra and basic differential calculus. The author avoids unessential technical discussions and instead describes in detail many interesting examples, including formulae which have not previously appeared in book form. Topics covered include the Haar measure and invariant integration, spherical harmonics, Fourier analysis and the heat equation, Poisson kernel, the Laplace equation and harmonic functions. Perfect for advanced undergraduates and graduates in geometric analysis, harmonic analysis and representation theory, the tools developed will also be useful for specialists in stochastic calculation and the statisticians. With numerous exercises and worked examples, the text is ideal for a graduate course on analysis on Lie groups.