Record Nr. UNINA9910154746903321 Autore Guillemin Victor Titolo Cosmology in (2 + 1) -Dimensions, Cyclic Models, and Deformations of M2,1. (AM-121), Volume 121 / / Victor Guillemin Pubbl/distr/stampa Princeton, NJ: .: Princeton University Press, . [2016] ©1989 **ISBN** 1-4008-8241-9 Descrizione fisica 1 online resource (236 pages): illustrations Collana Annals of Mathematics Studies;; 352 Disciplina 523.1/072/4 Soggetti Cosmology - Mathematical models Geometry, Differential Lorentz transformations Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Nota di bibliografia Includes bibliographical references. Nota di contenuto Frontmatter -- Contents -- Foreword -- Part I. A relativistic approach to Zoll phenomena -- Part II. The general theory of Zollfrei deformations -- Part III. Zollfrei deformations of M2,1 -- Part IV. The generalized x-ray transform -- Part V. The Floquet theory --Bibliography Sommario/riassunto The subject matter of this work is an area of Lorentzian geometry which has not been heretofore much investigated: Do there exist Lorentzian manifolds all of whose light-like geodesics are periodic? A surprising fact is that such manifolds exist in abundance in (2 + 1)dimensions (though in higher dimensions they are quite rare). This book is concerned with the deformation theory of M2,1 (which furnishes almost all the known examples of these objects). It also has a section describing conformal invariants of these objects, the most interesting being the determinant of a two dimensional "Floquet operator," invented by Paneitz and Segal.