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| 1. Record Nr. | UNINA9910717418803321 |
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| Titolo | Heat kernel on lie groups and maximally symmetric spaces // Ivan G. Avramidi |
| Pubbl/distr/stampa | Cham, Switzerland : , : Springer Nature Switzerland AG , [2023] ©2023 |
| ISBN | 9783031274510 9783031274503 |
| Edizione | [1st ed. 2023.] |
| Descrizione fisica | 1 online resource (197 pages) |
| Collana | Frontiers in Mathematics, , 1660-8054 |
| Disciplina | 515.353 |
| Soggetti | Heat equation Kernel functions Lie groups Symmetric spaces Equació de la calor Funcions de Kernel Grups de Lie Espais simètrics Llibres electrònics |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Part I. Manifolds -- Chapter. 1. Introduction -- Chapter. 2. Geometry of Simple Groups -- Chapter. 3. Geometry of SU(2) -- Chapter. 4. Maximally Symmetric Spaces -- Chapter. 5. Three-dimensional Maximally Symmetric Spaces -- Part II: Heat Kernel -- Chapter. 6. Scalar Heat Kernel -- Chapter. 7. Spinor Heat Kernel -- Chapter. 8. Heat Kernel in Two Dimensions -- Chapter. 9. Heat Kernel on S3 and H3 -- Chapter. 10. Algebraic Method for the Heat Kernel -- Appendix A -- References -- Index. |
| Sommario/riassunto | This monograph studies the heat kernel for the spin-tensor Laplacians on Lie groups and maximally symmetric spaces. It introduces many original ideas, methods, and tools developed by the author and provides a list of all known exact results in explicit form – and derives |

them – for the heat kernel on spheres and hyperbolic spaces. Part I considers the geometry of simple Lie groups and maximally symmetric spaces in detail, and Part II discusses the calculation of the heat kernel for scalar, spinor, and generic Laplacians on spheres and hyperbolic spaces in various dimensions. This text will be a valuable resource for researchers and graduate students working in various areas of mathematics – such as global analysis, spectral geometry, stochastic processes, and financial mathematics – as well in areas of mathematical and theoretical physics – including quantum field theory, quantum gravity, string theory, and statistical physics.
