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ramifications. Starting off with several models of hyperbolic space and its group of motions the authors discuss the spectral theory of the Laplacian and Selberg's theory for cofinite groups. The interplay with arithmetic is demonstrated by means of the groups PSL(2) over rings of quadratic integers, their Eisenstein series and their associated Hermitian forms. A comprehensive chapter on concrete examples of arithmetic and non arithmetic cofinite groups enhances the usefulness of this work for a wide audience of mathematicians.

E.I. KHUKHRO. — ***p*-automorphisms of finite *p*-groups.** — London Mathematical Society lecture note series, vol. 246. — Un vol. broché, 15×23, de XVII, 204 p. — ISBN 0-521-59717-X. — Prix: £24.95. — Cambridge University Press, Cambridge, 1998.

This book provides a detailed but concise account of the theory of structure of finite p-groups admitting p-automorphisms with few fixed points. The relevant preliminary material on Lie rings is introduced and the main theorems of the book on the solubility of finite p-groups are then presented. The proofs involve notions such as viewing automorphisms as linear transformations, associated Lie rings, powerful p-groups, and the correspondences of A.I. Mal'cev and M. Lazard given by the Baker-Hausdorff formula. Many exercises are included.

Groupes topologiques et groupes et algèbres de Lie

E.A. DE KERF, G.G.A. BÄUERLE, A.P.E. TEN KROODE. — **Lie algebras, Part 2: Finite and infinite dimensional.**

Lie algebras and applications in physics. — Studies in mathematical physics, vol. 7. — Un vol. relié, 16×23, de X, 554 p. — ISBN 0-444-82836-2. — Prix: Dfl. 265.00. — North-Holland, Amsterdam, 1997.

Extensions of Lie algebras. — Explicit construction of affine Kac-Moody algebras. — Representations – enveloping algebra techniques. — The Weyl group and integrable representations. — More on representations. — Characters and multiplicities. — Quarks, leptons and gauge fields. — Lie algebras of infinite matrices. — Representations of loop algebras. — KP-hierarchies. — Conformal symmetry.

Juan TIRAO, David A. VOGAN, Jr., Joseph A. WOLF, (Editors). — **Geometry and representation theory of real and *p*-adic groups.** — Progress in mathematics, vol. 158. — Un vol. relié, 16×24, de X, 323 p. — ISBN 0-8176-3941-4. — Prix: SFr. 118.00. — Birkhäuser, Boston, 1998.

The representation theory of Lie groups plays an important rôle in both classical and recent developments in mathematics and physics. The 14 expository articles in this book provide a fast-paced and thorough introduction to the more active parts of representation theory and to some of its ongoing applications. These expositions contain many interesting conjectures and indications of fruitful future research areas. Some of these directions are filled in by the research articles of Bratten, Burde, Garnica, Galina, Johnson and Levstein-Tiraboshi.

Fonctions de variables réelles

Alan F. BEARDON. — **Limits: a new approach to real analysis.** — Undergraduate text in mathematics. — Un vol. relié, 16×24, de IX, 189 p. — ISBN 0-387-98274-4. — Prix: DM 58.00. — Springer, New York, 1997.

This book includes all the standard material such as sequences, infinite series, continuity, differentiation, and integration, together with worked examples and exercises. By unifying and