

Zeitschrift: L'Enseignement Mathématique
Herausgeber: Commission Internationale de l'Enseignement Mathématique
Band: 46 (2000)
Heft: 3-4: L'ENSEIGNEMENT MATHÉMATIQUE

Kapitel: Topologie algébrique

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Topologie algébrique

Lech GÓRNIWICZ. — **Topological fixed point theory of multivalued mappings.** — Mathematics and its applications, vol. 495. — Un vol. relié, 16×25, de ix, 399 p. — ISBN 0-7923-6001-X. — Prix: Dfl. 330.00. — Kluwer Academic Publishers; Dordrecht, 1999.

This volume presents a broad introduction to the topological fixed point theory of multivalued (set-valued) mappings, treating both classical concepts as well as modern techniques. Topics covered include the basic theory of set-valued mappings with both convex and nonconvex values, approximation and homological methods in the fixed point theory together with a thorough discussion of various index theories for mappings with a topologically complex structure of values, applications to many fields of mathematics, mathematical economics and related subjects, the fixed point approach to the theory of ordinary differential inclusions.

Topologie des variétés, analyse globale et analyse des variétés

Boris N. APANASOV. — **Conformal geometry of discrete groups and manifolds.** — De Gruyter expositions in mathematics, vol. 32. — Un vol. relié, 17,5×24,5, de XIII, 523 p. — ISBN 3-11-014404-2. — Prix: DM 298.00. — Walter de Gruyter, Berlin, 2000.

This book presents the first systematic account of conformal geometry of n -manifolds, as well as its Riemannian counterparts. A unifying theme is their discrete holonomy groups. In particular, hyperbolic manifolds, in dimension 3 and higher, are addressed. The treatment covers also relevant topology, algebra (including combinatorial group theory and varieties of group representations), arithmetic issues, and dynamics. Progress in these areas has been very fast over the last two decades, especially due to the Thurston geometrization program, leading to the solution of many difficult problems. A strong effort has been made to point out new connections and perspectives in the field and to illustrate various aspects of the theory. An intuitive approach which emphasizes the ideas behind the constructions is complemented by a large number of examples and figures which both use and support the reader's geometric imagination. The text will be of value to graduate students and researchers in topology, geometry, group representations and theoretical physics.

Eduardo CASAS-ALVERO. — **Singularities of plane curves.** — London Mathematical Society lecture note series, vol. 276. — Un vol. broché, 15×23, de xv, 345 p. — ISBN 0-521-78959-1. — Prix: £29.95. — Cambridge University Press, Cambridge, 2000.

This book provides a comprehensive and self-contained exposition of the algebro-geometric theory of singularities of plane curves, covering both its classical and its modern aspects. The book gives a unified treatment, with complete proofs, presenting modern results which have only ever appeared in research papers. It updates and correctly proves a number of important classical results for which there was formerly no suitable reference, and includes new, previously unpublished results as well as applications to algebra and algebraic geometry.

Erica FLAPAN. — **When topology meets chemistry: a topological look at molecular chirality.** — Outlooks. — Un vol. broché, 15×22,5, de XIII, 241 p. — ISBN 0-521-66482-9 (relié: 0-521-66254-0). — Prix: £16.95 (relié: £45.00). — Mathematical Association of America and Cambridge University Press, Cambridge, 2000.

The applications of topological techniques for understanding molecular structures have become increasingly important over the past thirty years. In this topology text, the reader will learn about knot theory, 3-dimensional manifolds, and the topology of embedded graphs, while