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Hans TRIEBEL. — **Fractals and spectra: related to Fourier analysis and function spaces.** — Monographs in mathematics, vol. 91. — Un vol. relié, 17,5×24, de viii, 271 p. — ISBN 3-7643-5776-2. — Prix: SFr. 128.00. — Birkhäuser Verlag, Basel, 1997.

This book deals with the symbiotic relationship between the theory of function spaces, fractal geometry, and spectral theory of (fractal) pseudodifferential operators as it has emerged quite recently. Atomic and quarkonial (subatomic) decompositions in scalar and vector valued function spaces on the Euclidean n -space pave the way to study properties (compact embeddings, entropy numbers) of function spaces on and of fractals. On this basis, distributions of eigenvalues of fractal (pseudo)differential operators are investigated. Diverse versions of fractal drums are played.

Calcul des variations

Pablo PEDREGAL. — **Parametrized measures and variational principles.** — Progress in nonlinear differential equations and their applications, vol. 30. — Un vol. relié, 16×24, de vii, 212 p. — ISBN 3-7643-5697-9. — Prix: SFr. 88.00. — Birkhäuser Verlag, Basel, 1997.

The purpose of this book is to present a new approach to fundamental questions concerning the calculus of variations based on a systematic analysis of Young measures. Weak lower semi-continuity and relaxation are main areas of concentration in this work. The unified treatment of scalar and vector cases developed here is suitable also for more general situations. Applications to problems in continuum mechanics and nonlinear elasticity are analyzed in depth.

Géométrie

Albrecht BEUTELSPACHER, Ute ROSENBAUM. — **Projective geometry: from foundations to applications.** — Un vol. broché, 15×23, de x, 258 p. — ISBN 0-521-48364-6. — Prix: £45.00. — Cambridge University Press, Cambridge, 1998.

This book presents the foundations of classical projective and affine geometry as well as its important applications in coding theory and cryptography. It could also serve as a first introduction to diagram geometry. Written in clear and contemporary language with an entertaining style and around 200 exercises, examples and hints, this book is ideally suited for use either as a textbook to accompany courses or for self-study.

David GAY. — **Geometry by discovery.** — Un vol. relié, 19,5×24,5, de xiv, 410 p. — ISBN 0-471-04177-7. — Prix: £24.95. — John Wiley, New York, 1998.

This book is a new approach to geometry. This ground-breaking text taps the pedagogical value of discovery to help students stretch their geometric perspective and hone their geometric intuition. It actively engages students in solving mathematical problems, and empowers them to be successful problem-solvers and discoverers of mathematical ideas.

J.W.P. HIRSCHFELD. — **Projective geometries over finite fields.** — Second edition. — Oxford mathematical monographs. — Un vol. relié, 16,5×24, de xiv, 555 p. — ISBN 0-19-850295-8. — Prix: £65.00. — Clarendon Press, Oxford, 1998.

This is a completely revised edition of the 1979 work with the same title. The original intention that the book be fully self-contained has yielded to the need to include theorems that are intrinsic to the topics but want deeper background results. The prerequisites for reading this book