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aber sehr rasch zu Ebenen übergegangen wird, die von kommutativen Körpen koordinatisiert werden. In affinen Ebenen werden die Mittelpunktsrelation studiert, die erstaunliche Konsequenzen hat, sowie Orthogonalitätsrelationen und das Winkelhalbieren. Ist das Winkelhalbieren immer möglich, trägt der Koordinatenkörper eine Anordnung, so dass man schon sehr nahe bei der euklidischen Ebene ist. Zum Schluss, im siebten Kapitel, wird dann gezeigt, welche geometrischen Eigenschaften dazu dienen können, die reelle Ebene unter allen übrigen affinen Ebenen auszuzeichnen.

Ensembles convexes et inégalités géométriques

Keith M. BALL, Vitali MILMAN, (Editors). — **Convex geometric analysis.** — Mathematical Sciences Research Institute publications, vol. 34. — Un vol. relié, 16×24, de XX, 236 p. — ISBN 0-521-64259-0. — Prix: £30.00. — Cambridge University Press, Cambridge, 1999.

This collection of research and expository articles on convex geometry and probability reflects the work done at the program in convex geometry and geometric analysis that took place at MSRI in 1996, emphasizing the links between the geometry of convex bodies, probability theory, harmonic analysis, and recent probabilistic methods in computation. It includes contributions from C. Borell, J. Bourgain, E.D. Gluskin, W.T. Gowers, G. Kalai, G. Kuperberg, B. Maurey, V. Milman, A. Pajor, G. Schechtman, M. Schmuckenschlager, C. Schütt, G. Zang, and several of the most promising representatives of the new generation.

Chuanming ZONG. — **Sphere packings.** — Universitext. — Un vol. relié, 16,5×24,5, de XIII, 241 p. — ISBN 0-387-98794-0. — Prix: DM 79.00. — Springer, New York, 1999.

Sphere packings is one of the most fascinating and challenging subjects in mathematics. In addition to the classical sphere packing problems, this book also deals with the contemporary ones; such as, blocking light rays, the holes in sphere packings, and finite sphere packings. Not only are the main results of the subject presented, but also its creative methods from areas such as geometry, number theory, and linear programming are described. The book also contains short biographies of several masters of this discipline and many open problems.

Géométrie différentielle

Tobias H. COLDING, William P. MINICOZZI II. — **Minimal surfaces.** — Courant lecture notes, vol. 4. — Un vol. broché, 15,5×22,5, de VIII, 124 p. — ISBN 0-9658703-3-2. — Prix: US$20.00. — Courant Institute of Mathematical Sciences, New York, 1999.

These notes are an expanded version of a one-semester course taught at Courant in 1998. Chapter 1 will first derive the minimal surface equation as the Euler-Lagrange equation for the area functional on graphs. The focus of this chapter is on the basic properties of minimal surfaces, including the monotonocity formula for area and the Bernstein theorem. Chapter 2 deals with generalizations of the Bernstein theorem discussed in Chapter 1. Chapter 3 starts by introducing stationary varifolds as a generalization of classical minimal surfaces. A proof of a generalization of the Bernstein problem is given. Chapter 4 discusses the solution to the classical Plateau problem, focusing primarily on its regularity. Finally, in Chapter 5, the authors discuss the theory of minimal surfaces in three-manifolds.

Theodore FRANKEL. — **The geometry of physics: an introduction.** — Un vol. broché, 18×25, de XXII, 654 p. — ISBN 0-521-38753-1. — Prix: £22.95. — Cambridge University Press, Cambridge, 1998.

This book is intended to provide knowledge of those parts of exterior differential forms, differential geometry, algebraic and differential topology, Lie groups, vector bundles and Chern