Corps et polynômes

world and used more and more by physicists as well. This book offers a self-contained presentation of basic p-adic analysis. The author is especially interested in the analytical topics in this field. Some of the features that are not treated in other introductory p-adic analysis texts are topological models of p-adic spaces inside Euclidean space, a construction of spherically complete fields, a p-adic mean value theorem and some consequences, a special case of Hazewinkel's functional equation lemma, a remainder formula for the Mahler expansion, and most importantly a treatment of analytic elements.

Daniel B. SHAPIRO. — **Compositions of quadratic forms.** — De Gruyter expositions in mathematics, vol. 33. — Un vol. relié, 17×24, de XIII, 417 p. — ISBN 3-11-012629-X. — Prix: DM 248.00. — Walter de Gruyter, Berlin, 2000.

The central topic of this book is the theorem of Hurwitz and Radon concerning composition formulas for sums of squares, first proved in the 1920's. Techniques from algebra and topology are used to generalize that theorem in several directions. The text includes worked examples and many exercises which develop still more variations of the central topic. The main audience is people who have had some graduate courses in abstract algebra, but many sections of the book are accessible to anyone with some training in linear algebra. Several major topics in this book will be of interest to students of topology and geometry. The author has attempted to make the presentation as clear and as elementary as possible.

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Karl RUBIN. — **Euler systems.** — Annals of mathematics studies, no. 147. — Un vol. broché, 15,5×23,5, de XI, 225 p. — ISBN 0-691-05076-7. — Prix: US$24.95. — Princeton University Press, Princeton, N.J., 2000.

Euler systems are special collections of cohomology classes attached to p-adic Galois representations. The author presents a self-contained development of the theory of Euler systems. Rubin first reviews and develops the necessary facts from Galois cohomology. He then introduces Euler systems, states the main theorems, and develops examples and applications. The remainder of the book is devoted to the proofs of the main theorems as well as some further speculations.

Andrzej SCHINZEL. — **Polynomials with special regard to reducibility.** — Encyclopedia of mathematics and its applications, vol. 77. — Un vol. relié, 16×24, de X, 558 p. — ISBN 0-521-66225-7. — Prix: £60.00. — Cambridge University Press, Cambridge, 2000.

This book is an attempt to cover most of the results on reducibility of polynomials over fairly large classes of fields; results valid only over finite fields, local fields or the rational field have not been included. On the other hand, included are many topics of interest to the author that are not directly related to reducibility, e.g. Ritt's theory of composition of polynomials. *Contents*: Arbitrary polynomials over an arbitrary field. — Lacunary polynomials over an arbitrary field. — Polynomials over an algebraically closed field. — Polynomials over a finitely generated field. — Polynomials over a number field. — Polynomials over a Kroneckerian field.

Géométrie algébrique

Jean-Benoît BOST, François LOESER, Michel RAYNAUD, (Editeurs). — **Courbes semi-stables et groupe fondamental en géométrie algébrique: Luminy, décembre 1998.** — Progress in mathematics, vol. 187. — Un vol. relié, 16×24, de VII, 289 p. — ISBN 3-7643-6308-8. — Prix: SFr. 98.00. — Birkhäuser, Basel, 2000.

The purpose of this volume is twofold. Firstly, it gives an account of basic facts concerning rigid geometry, stable curves, and algebraic fundamental groups, in a form which should make