Corps et polynômes

and coding theorists. Recently, the authors discovered another important application of algebraic curves over finite fields with many rational points, namely to the construction of low-discrepancy sequences. These sequences are needed for numerical methods in areas as diverse as computational physics and mathematical finance. This has given additional impetus to the theory of, and the search for, algebraic curves over finite fields with many rational points.

Alexei SKOROBOGATOV. — **Torsors and rational points.** — Cambridge tracts in mathematics, vol. 144. — Un vol. relié, 16×24, de VIII, 187 p. — ISBN 0-521-80237-7. — Prix: £35.00. — Cambridge University Press, Cambridge, 2001.

The classical descent on curves of genus one can be interpreted as providing conditions on the set of rational points of an algebraic variety X defined over a number field, viewed as a subset of its adelic points. This is a natural set-up of the Hasse principle and various approximation properties of rational points. This book represents the first detailed exposition of: The general theory of torsors with key examples. – The relation of descent to the Manin obstruction. – Applications of descent to conic bundles, to bielliptic surfaces, and to homogenous spaces of algebraic groups.

Corps et polynômes

Jean-Pierre TIGNOL. — **Galois' theory of algebraic equations.** — Un vol. broché, 15,5×21,5, de XIII, 333 p. — ISBN 981-02-4541-6. — Prix: £26.00. — World Scientific, Singapore, 2001.

Galois' Theory of Algebraic Equations gives a detailed account of the development of the theory of algebraic equations, from its origins in ancient times to its completion by Galois in the nineteenth century. The main emphasis is placed on equations of at least the third degree, i.e. on the developments during the period from the sixteenth to the nineteenth century. The appropriate parts of works by Cardano, Lagrange, Vandermonde, Gauss, Abel and Galois are reviewed and placed in their historical perspective, with the aim of conveying to the reader a sense of the way in which the theory of algebraic equations has evolved and has led to such basic mathematical notions as "group" and "field". A brief discussion of the fundamental theorems of modern Galois theory is included. Complete proofs of the quoted results are provided, but the material has been organized in such a way that the most technical details can be skipped by readers who are interested primarily in a broad survey of the theory. This book will appeal to both undergraduate and graduate students in mathematics and the history of science, and also to teachers and mathematicians who wish to obtain a historical perspective of the field.

Géométrie algébrique

Chris GODSIL, Gordon ROYLE. — **Algebraic graph theory.** — Graduate texts in mathematics, vol. 207. — Un vol. relié, 16,5×24, de XIX, 439 p. — ISBN 0-387-95241-1. — Prix: DM 149.00. — Springer, New York, 2001.

Algebraic graph theory is a combination of two strands. The first is the study of algebraic objects associated with graphs. The second is the use of tools from algebra to derive properties of graphs. The authors' goal has been to present and illustrate the main tools and ideas of algebraic graph theory, with an emphasis on current rather than classical topics. While placing a strong emphasis on concrete examples they tried to keep the treatment self-contained. A substan-