Histoire

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Sir Michael ATIYAH, Daniel IAGOLNITZERN, (Editors). — **Fields medallists' lectures.** — World Scientific series in 20th century mathematics, vol. 5. — Un vol. broché, 16,5×25, de x, 632 p. — ISBN 981-02-3117-2. — Prix: £33.00 (relié: £60.00). — World Scientific, Singapore, 1997.

Although the Fields Medal does not have the same public recognition as the Nobel Prizes, they share a similar intellectual standing. A list of Fields Medallists and their contributions provides a bird's eye view of mathematics over the past 60 years. It highlights the areas in which, at various times, greatest progress has been made. This volume does not pretend to be comprehensive, nor is it a historical document. On the other hand, it presents 22 Fields Medallists and so provides a highly interesting and varied picture. The contributions themselves represent the choice of the individual medallists. They are either reproductions of already published works, or are new articles produced for this volume. Some are related to more current interests of the medallists.

Lars GÅRDING. — **Some points of analysis and their history.** — University lecture series, vol. 11. — Un vol. broché, 18×25,5, de VII, 88 p. — ISBN 0-8218-0757-9. — Prix: £10.00. — American Mathematical Society, Providence, distributed by Oxford University Press, Oxford, 1998.

This book is a collection of small essays containing the history and the proofs of some important and interesting theorems of analysis and partial differential operators in this century. Most of the results in the book are associated with Swedish mathematicians. Also included are the Tarski-Seidenberg theorem and Wiener's classical results in harmonic analysis and a delightful essay on the impact of distributions in analysis. All mathematical points are fully explained, but some require a certain mature understanding from the reader.

Jay R. GOLDMAN. — **The queen of mathematics: a historically motivated guide to number theory.** — Un vol. relié, 16,5×23,5, de XXIV, 525 p. — ISBN 1-56881-006-7. — Prix: US$59.95. — A.K. Peters, Wellesley, Massachusetts, 1998.

This book takes the unique approach of examining number theory as it developed from the 17th through 19th centuries. It introduces the reader to diverse mathematical players: Fermat, Euler, Lagrange, Legendre, Dedekind, Hilbert, and more. Gauss and his *Disquisitiones Arithmeticae* receive a particularly intensive treatment. The text then moves on to tackle some advanced themes including arithmetic on curves, geometry of numbers, p-adic numbers and valuations, and the interconnected topics of irrational and transcendental numbers and Diophantine approximation.

Frank SMITHIES. — **Cauchy and the creation of complex function theory.** — Un vol. relié, 16×24, de 216 p. — ISBN 0-521-59278-X. — Prix: £35.00. — Cambridge, Cambridge University Press, 1997.

The author analyses the process whereby Cauchy created the basic structure of complex analysis, describing first the eighteenth-century background before proceeding to examine the stages of Cauchy's own work, culminating in the proof of the residue theorem and his work on expansions in power series. Smithies describes how Cauchy overcame difficulties including false starts and contradictions brought about by over-ambitious assumptions, as well as the improvements that came about as the subject developed in Cauchy's hands. Controversies associated with the birth of complex function theory are described in detail. Throughout, new light is thrown on Cauchy's thinking during this watershed period.