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differential equations, and connections have been made to other topics such as numerical methods, cellular automata and mathematical physics. This volume is comprised of state-of-the-art articles from almost all the leading workers in this important and rapidly developing area, making it a necessary resource for all researchers interested in discrete integrable systems or related subjects.

### *Approximations et développements en série*

N.K. GOVIL, R.N. MOHAPATRA, Z. NASHED, A. SHARMA, J. SZABADOS, (Editors). — **Approximation theory: in memory of A.K. Varma.** — Pure and applied mathematics, vol. 212. — Un vol. relié, 16×23,5, de xxii, 517 p. — ISBN 0-8247-0185-2. — Prix: US\$195.00. — Marcel Dekker, Inc., New York, 1998.

This work honors A.K. Varma's indelible contributions to the field of approximation theory with a collection of over 30 carefully selected papers by 45 internationally distinguished mathematicians, reflecting his lifelong passion for investigating subjects such as interpolation by polynomials and splines, quadrature formulae, order of pointwise and uniform approximation of finitely differentiable functions by polynomials, and Bernstein and Markov type inequalities in  $L^p$  and uniform metrics.

### *Analyse de Fourier, analyse harmonique abstraite*

Christian BLATTER. — **Wavelets: a primer.** — Un vol. relié, 16×23,5, de x, 202 p. — ISBN 1-56881-095-4. — Prix: US\$32.00. — A.K. Peters, Natick, 1998.

The wavelet transform, with its many applications, has become a major new mathematical technique. It has stimulated research unparalleled since the invention of the Fast Fourier Transform (FFT) and opened new avenues of application in signal processing, image compression, radiology, cardiology, and many other areas. This book grew out of a short course for mathematics students at the ETH in Zürich; it provides a solid, yet accessible, mathematical foundation for those interested in learning about wavelets and pursuing the broad range of applications for which the wavelet transform has proved successful.

C. GASQUET, P. WITOMSKI. — **Fourier analysis and applications: filtering, numerical computation, wavelets.** — Translated by R. Ryan. — Texts in applied mathematics, vol. 30. — Un vol. relié, 16×24, de xviii, 442 p. — ISBN 0-387-98485-2. — Prix: DM 98.00. — Springer, New York, 1999.

The object of this text, which focuses on Fourier analysis, signal analysis, and filters, is twofold. On the one hand, it conveys to the mathematician a rigorous presentation illustrated with important practical applications of the theory, including a discussion of the Fast Fourier Transform. On the other hand it imparts to the physicist and engineer a body of theory in which the well-known formulae find their justification. There is a systematic development of fundamental concepts, such as the Lebesgue integration and theory of distributions, which allows one to establish precise relations among several domains: Fourier transform and convolution; filtering and sampling; and time-frequency analysis (Gabor transforms and wavelets).

Abdul J. JERRI. — **The Gibbs phenomenon in Fourier analysis, splines and wavelet approximations.** — Mathematics and its applications, vol. 446. — Un vol. relié, 16,5×24,5, de xxvii, 336 p. — ISBN 0-7923-5109-6. — Prix: Dfl. 300.00. — Kluwer Academic Publishers, Dordrecht, 1998.

This is the first book dedicated to covering the basic elements of the Gibbs phenomenon as it appears in various applications where functions with jump discontinuities are represented. It