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Chebyshev Approximation: Practice; 30 Rational Function Approximation; III Fourier Approximation-Modern Theory; 31 Fourier Series: Periodic Functions; 32 Convergence of Fourier Series 33 The Fast Fourier Transform 34 The Fourier Integral: Nonperiodic Functions; 35 A Second Look at Polynomial Approximation-Filters; 36 Integrals and Differential Equations; 37 Design of Digital Filters; 38 Quantization of Signals; IV Exponential Approximation; 39 Sums of Exponentials; 40 The Laplace Transform; 41 Simulation and the Method of Zeros and Poles; V Miscellaneous; 42 Approximations to Singularities; 43 Optimization; 44 Linear Independence; 45 Eigenvalues and Eigenvectors of Hermitian Matrices; N + 1 The Art of Computing for Scientists and Engineers; Bibliography; Index

Sommario/riassunto

Numerical analysis is a subject of extreme interest to mathematicians and computer scientists, who will welcome this first inexpensive paperback edition of a groundbreaking classic text on the subject. In an introductory chapter on numerical methods and their relevance to computing, well-known mathematician Richard Hamming ("the Hamming code," "the Hamming distance," and "Hamming window," etc.), suggests that the purpose of computing is insight, not merely numbers. In that connection he outlines five main ideas that aim at producing meaningful numbers that will be read and used, but wil
