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The book incorporates research papers and surveys written by participants of an International Scientific Programme on Approximation Theory jointly supervised by Institute for Constructive Mathematics of University of South Florida at Tampa, USA and the Euler International Mathematical Institute at St. Petersburg, Russia. The aim of the Programme was to present new developments in Constructive Approximation Theory. The topics of the papers are: asymptotic behaviour of orthogonal polynomials, rational approximation of classical functions, quadrature formulas, theory of  $n$ -widths, nonlinear approximation in Hardy algebras, numerical results on best polynomial approximations, wavelet analysis. FROM THE CONTENTS: E.A. Rakhmanov: Strong asymptotics for orthogonal polynomials associated with exponential weights on  $\mathbb{R}$ .- A.L. Levin, E.B. Saff: Exact Convergence Rates for Best  $L_p$  Rational Approximation to the Signum Function and for Optimal Quadrature in  $H_p$ .- H. Stahl: Uniform Rational Approximation of  $x$ .- M. Rahman, S.K. Suslov: Classical Biorthogonal Rational Functions.- V.P. Havin, A. Presa Sague: Approximation properties of harmonic vector fields and differential forms.- O.G. Parfenov: Extremal problems for Blaschke products and  $N$ -widths.- A.J. Carpenter, R.S. Varga: Some Numerical Results on Best Uniform Polynomial Approximation of  $x$  on  $[0,1]$ .- J.S. Geronimo: Polynomials Orthogonal on the Unit Circle with Random Recurrence Coefficients.- S. Khrushchev: Parameters of orthogonal polynomials.- V.N. Temlyakov: The universality of the Fibonacci cubature formulas.