

Preface

This volume contains contributions to the international conference on Constructive Theory of Functions that took place in Sozopol, Bulgaria, June 3–10, 2010. The conference was dedicated to the memory of Professor Borislav Bojanov, who passed away suddenly on April 8, 2009. Eighty three participants from twenty four countries came to Sozopol to commemorate the respected teacher, outstanding mathematician, dear friend and remarkable person.

The volume contains twenty nine articles, which cover a wide range of topics in the classical approximation theory, among them are: direct and converse approximation theorems and moduli of smoothness; convergence of Fourier series; greedy algorithms; sharp integral inequalities for trigonometric polynomials; Markov and Duffin-Schaeffer type inequalities for polynomials with curved majorants; Szegő-Schur composition of algebraic polynomials; interlacing properties of the zeros of polynomials and generalized polynomials in Chebyshev systems; Kolmogorov-Landau inequalities; n -widths; inequalities for entire functions of exponential type; bivariate polynomials of least uniform deviation on the disk; multivariate inequalities of Bernstein type on convex bodies; poisedness of multivariate polynomial interpolation; extremal properties of the multivariate Chebyshev polynomials. Several articles are devoted to both theoretical and practical aspects of approximation: interpolation by bivariate polynomials using data consisting of both point evaluations and Radon transforms; interpolation on graphs and scattered data interpolation by minimal norm networks in \mathbb{R}^3 ; multivariate Hermite interpolation on scattered point sets by radial generalized expo-rational B-splines; error estimation of cubature formulae, etc. The last paper of Borislav Bojanov (joint with his former student Chrisina Jayne) concerning surface approximation by piece-wise harmonic functions is also recorded here. Six of the open problems, presented at Conference's "Open Problems Session", are included at the end of the volume.

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