İSTANBUL ANALYSIS SEMINARS

VIDENSKII POLYNOMIALS AND RELATED PROBLEMS

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Abstract: V.S. Videnskii proved in 1960s inequalities for derivatives of trigonometric polynomials of (half)integer order on an interval shorter than period. He discovered a nice formula for the related extremal polynomials. Later it turned out that some of these inequalities can be deduced from general principles of the potential theory. Author's recent results (including joint with S.V. Tyshkevich and M.A. Aktürk) about extremal problems of the approximation theory, where the Videnskii polynomials are extremal or supposed to be extremal, and related problems from potential theory are discussed.

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