

Approximation of Analytic Functions of Several Variables by Linear K-Positive Operators in the Closed Domain

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Abstract : We investigate the approximation of analytic functions of several variables in polydisc by the sequences of linear k-positive operators in Gadjiev sence. The approximation of analytic functions of complex variable by linear k-positive operators was tackled, and k-positive operators and formulated theorems of Korovkin's type for these operators in the space of analytic functions on the unit disc were introduced in the past. Recently, very general results on convergence of the sequences of linear k-positive operators on a simply connected bounded domain within the space of analytic functions were proved. In this presentation, we extend some of these results to the approximation of analytic functions of several complex variables by sequences of linear k-positive operators.

Keywords : analytic functions, approximation of analytic functions, Linear k-positive operators, Korovkin type theorems

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