

GENERALIZED ALMOST CONVERGENCE OF DOUBLE SEQUENCES IN MODULAR FUNCTION SPACES

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ABSTRACT. This article deals with almost convergence of double sequences using a new generalization of fractional-order difference operator in modular spaces and application to the Korovkin-type approximation in the context of modular spaces for positive linear operators. We then obtain several inclusion relations and present some examples, include proper non-trivial extensions of the corresponding classical ones. Further, we extend our study to new modular forms of Korovkin-type approximation theorems. Finally, we give an example using bivariate Chlodowsky–Szász–Kantorovich–Charlier-type operators and outline possible further extensions and improvements, in order to illustrate the effectiveness of the proposed methods.

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