

Extension of the best polynomial approximation operator in Musielak–Orlicz spaces

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Abstract. In this paper, we considered the best polynomial approximation operator defined in the so-called Musielak–Orlicz space. Namely, we investigated the existence and uniqueness of the best polynomial approximation in Musielak–Orlicz space L^Φ . We extended the best polynomial approximation operator from L^Φ to L^φ , where $\varphi(x, t) = \Phi'_{t+}(x, t)$. In addition, we established some properties of the extended best polynomial approximation operator.

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