SOME APPROXIMATION PROPERTIES OF NONLINEAR SINGULAR INTEGRAL OPERATORS IN BV$_\varphi$-SPACES

Harun Karsli

Abant Izzet Baysal University Faculty of Science and Arts,
Department of Mathematics, 14280 Golkoy Bolu, Turkey
[karsli_h@ibu.edu.tr]

As a continuation and extension of the paper [2], in this study we give some results and estimates concerning convergence in $\varphi-$variation, rate of pointwise approximation to the points x, having a discontinuity of the first kind and at the Lebesgue points of f for a family $\mathbb{T}$ of nonlinear singular integral operators defined as;

$$(T_\lambda f)(x) = \int\limits_a^b K_\lambda(t-x, f(t))\, dt, \quad x \in\, <a,b>,$$

where $f \in BV_\varphi <a,b>$, as $\lambda \to \lambda_0$. Here the kernels $\mathbb{K} = \{K_\lambda\}$ satisfy some suitable singularity assumptions, and $<a,b>$ is any arbitrary finite interval in $\mathbb{R}$.

REFERENCES

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