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The order of approximation by the family of integral operators with positive kernel.
(English summary)

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In a previous paper [Trans. Acad. Sci. Azerb. Ser. Phys.-Tech. Math. Sci. **22** (2002), no. 1, Math. Mech., 56–61, 253; MR1949186 (2003i:41030)], the author gave a result concerning the pointwise approximation of integrable functions at their generalized Lebesgue points by means of a family $(L_\lambda)_{\lambda>0}$ of integral operators of type

$$L_\lambda(f;x) = \int_A^B f(t)K_\lambda(t,x)\,dt \quad (x \in [a,b]),$$

where the positive kernel $K_\lambda(t,x)$ satisfies certain conditions.

In the paper under review, the author deals with the order of such an approximation, using some estimates due to A. D. Gadjiev for integrals of type

$$I = \int_A^B f(t)\mu(t)\,dt$$

where μ is an increasing function such that $\mu(0) = 0$, and obtains two different estimates, the first one for bounded intervals and the second for the entire real line.

Reviewed by *Vita Leonessa*