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Boundedness and compactness criteria for positive kernel operators in variable exponent Lebesgue spaces

Necessary and sufficient conditions governing the boundedness/compactness of integral operators with positive kernels in variable exponent Lebesgue spaces are derived. The exponents of spaces satisfy the local weak logarithmic condition as well as logarithmic condition at infinity. In the case when the operator is bounded but not compact, we estimate its measure of non-compactness (essential norm) from above and below. The operators under consideration involves, for example, fractional integrals. The weighted boundedness/compactness criteria in variable exponent amalgam spaces are also established for positive kernel and maximal operators.