

# Weighted Estimations in Variable Exponent Analysis on Metric Measure Spaces

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## Abstract

Last decade there was observed an increasing interest to function spaces whose main characteristics may vary from point to point, such as the Lebesgue spaces  $L^{p(x)}$ , Sobolev spaces  $W^{m,p(x)}$ , Morrey spaces  $L^{\lambda(x),p(x)}$  or Holder spaces  $H^{\lambda(x)}$  and others. They may be considered on domains in the Euclidean spaces, on surfaces, on homogeneous groups and on metric measure spaces in general. In this talk there are discussed problems of weighted boundedness of the classical operators of harmonic analysis (maximal, singular and potential operators) in such variable spaces on metric measure spaces, both in homogeneous and non-homogeneous cases