Mahmud Ahmadov* (mahmadov@hcc.edu), 303 Homestead Ave, Holyoke, MA 01040. *On
Weighted Boundary Values of Sobolev Spaces.

Traces of Sobolev spaces has been well investigated, and it is well known that functions from Sobolev spaces have traces only if weights have a weak degeneration. In this work we introduce the idea of a weighted boundary value of functions from Sobolev spaces with strongly degenerating weights. We give sufficient conditions for existence of weighted boundary values. We also show that Sobolev spaces with strongly degenerating weights do not have a maximum rate of singularity, and for some special cases, find the upper boundary rate of singularities. (Received January 24, 2019)