

## COMPACTNESS OF EMBEDDING BETWEEN SPACES WITH MULTIWEIGHTED DERIVATIVES – THE CASE $p \leq q$

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*Abstract.* This paper deal with a new Sobolev type function space called the space with multi-weighted derivatives. This space is a generalization of the usual one dimensional Sobolev space. As basis for this space serves some differential operators containing weight functions.

We establish necessary and sufficient conditions for the boundedness and compactness of the embedding between the spaces with multiweighted derivatives with different weights and different metrics.

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