

Traces of multipliers in pairs of weighted Sobolev spaces

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Abstract. We prove that the pointwise multipliers acting in a pair of fractional Sobolev spaces form the space of boundary traces of multipliers in a pair of weighted Sobolev space of functions in a domain.

1. Introduction

By a multiplier acting from one Banach function space S_1 into another S_2 we call a function γ such that $\gamma u \in S_2$ for any $u \in S_1$. By $M(S_1 \rightarrow S_2)$ we denote the space of multipliers $\gamma : S_1 \rightarrow S_2$ with the norm

$$\|\gamma\|_{M(S_1 \rightarrow S_2)} = \sup\{\|\gamma u\|_{S_2} : \|u\|_{S_1} \leq 1\}.$$

We write MS instead of $M(S \rightarrow S)$, where S is a Banach function space. We shall use the same notation both for spaces of scalar and vector-valued multipliers.

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