Extension Theorems on Weighted Sobolev Spaces and Some Applications

Seng-Kee Chua

Abstract. We extend the extension theorems to weighted Sobolev spaces $L^p_{w,a}(D)$ on $(\varepsilon, \delta)$ domains with doubling weight $w$ that satisfies a Poincaré inequality and such that $w^{-1/p}$ is locally $L^{p'}$. We also make use of the main theorem to improve weighted Sobolev interpolation inequalities.

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