

Extension of certain distributions on weighted Hölder space and the Riemann boundary value problem for non-rectifiable curves

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Abstract

© 2014 Springer Basel. Let Γ be a non-rectifiable curve on the complex plane \mathbb{C} . We extend distributional derivative ∂F of a function F , which is holomorphic in domain $\mathbb{C} \setminus \Gamma$, up to continuous functional on the weighted Hölder space and apply this extension for solution of the Riemann boundary value problem on the curve Γ .

Keywords

Cauchy transform, Hölder space, Non-rectifiable arc, Riemann boundary value problem