SINGULAR INTEGRALS ON SIERPINSKI GASKETS

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Abstract

We construct a class of singular integral operators associated with homogeneous Calderón-Zygmund standard kernels on d-dimensional, $d < 1$, Sierpinski gaskets E_d. These operators are bounded in $L^2(\mu_d)$ and their principal values diverge μ_d almost everywhere, where μ_d is the natural (d-dimensional) measure on E_d.