R. Capitanelli
Dip. di Metodi e Modelli Matematici per le Scienze Applicate, Università di Roma I, Via A. Scarpa 16, 00161 Roma, Italy
`raffaela.capitanelli@uniroma1.it`

M. R. Lancia
Dip. di Metodi e Modelli Matematici per le Scienze Applicate, Università di Roma I, Via A. Scarpa 16, 00161 Roma, Italy
`lancia@dmmm.uniroma1.it`

Nonlinear Energy Forms and Lipschitz Spaces on the Koch Curve

We consider the nonlinear convex energy forms $\mathcal{E}^{(}p)$ on the Koch curve K and we prove that the corresponding domains coincide with the spaces $Lip_{\alpha,D_f}(p,\infty,K)$. Then we give a precise interpretation of the smoothness index α in terms of the structural constants of the fractal.

Keywords: Nonlinear convex energy forms, fractals, Lipschitz spaces.