

# Harnack inequality for nonlinear Dirichlet forms

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## Abstract

We define the notion of Dirichlet functionals and forms in the nonlinear  $p$ -homogeneous case. We give the chain rule for the energy of functional or of form. Finally we consider the Riemannian case and, in this case we prove an Harnack inequality on balls for the harmonics relative to the form.

**Key words:** Dirichlet forms, Harnack inequality, Regularity of harmonic functions

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