L_{pq}-cohomology : Basic properties and some applications

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The L_{pq}-cohomology of a Riemannian manifold (M, g) is the space of closed differential forms ω such that $\|\omega\| \in L^p(M)$ modulo the exterior differential of the L^q-forms.

In this talk, I will explain some of the basic properties of this cohomology, its relation with some geometric invariants of the manifold such as parabolicity or the existence of isoperimetric inequalities and I will give some applications to some geometric problems.