

# $L_{qp}$ -cohomology of a Riemannian manifold ( $M, g$ )

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The  $L_{qp}$ -cohomology of a Riemannian manifold  $(M, g)$  is the quotient of closed differential form in  $L^p(M)$  by the space of exact forms which are the differential of forms in  $L^q(M)$ . This invariant interpolates between the De Rham cohomology and the cohomology with compact support.

In this talk, I shall explain some of the basic properties of this invariant and some computational techniques. I will also explain the relations between  $L_{qp}$ -cohomology and Sobolev inequalities for differential forms.