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Cheeger type inequality for differential 1-forms

Abstract: On a compact Riemannian manifold, the Cheeger's inequality relates the first non zero eigenvalue of the Laplacian of functions with an isoperimetric constant of the manifold. J. Cheeger asked if an analogous inequality would hold for the first non zero eigenvalue of differential forms. We will discuss the case of 1-differential forms. (Joint work with Adrien Boulanger)