

Poincaré constant on manifolds with ends

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Abstract

To estimate the Poincaré constant of couples of concentric balls generalizes the Poincaré inequality, which is closely related to the Gaussian estimates of the heat kernel. In this talk, we give an optimal estimate of the Poincaré constant of couples of concentric balls on manifolds with ends by using heat kernel estimates recently proved by Grigor'yan, Saloff-Coste and the speaker. This talk is based on a joint work with Alexander Grigor'yam (Bielefeld university) and Laurent Saloff-Coste (Cornell university).