Abstract

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"**Persistent cohomology and Arrhenius law , Part II.**"

(joint work with D. Le Peutrec and C. Viterbo)

This work is about the accurate computation of exponentially small eigenvalues of semiclassical Witten Laplacians acting on p-forms. Even when the potential is not a Morse function and possibly Lipschitz (sub-analytic) it is possible to prove that the exponential scales are given by persistent (co)homology while the prefactors are related with local possibly solvable models. After stating this result in a simple form, I will explain on examples the spectral versions of the stability theorem of persistence homology.