# Critical points of Laplace eigenfunctions

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In this talk, we will review some recent (and not so recent) results concerning the number of critical points of Laplace eigenfunctions on manifolds. We will outline the construction of smooth metrics on the torus and on the sphere such that certain eigenfunctions have either very few or infinitely many critical points. We will also discuss some stability results. This talk includes joint work with Pierre Bérard and Bernard Helffer.