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Title: Deformations in Morse and Floer theory and applications to Hamiltonian dynamics

Abstract: I will discuss the use of ambient cycles to construct deformations of the standard chain complexes of Morse theory and Floer theory. In the context of Hamiltonian Floer theory in symplectic topology, these deformations can be used to obtain bounds on the Hofer-Zehnder capacity, and to construct quasimorphisms on the Hamiltonian diffeomorphism groups of new families of symplectic manifolds.