Title:
On persistence modules in symplectic topology.

Abstract:
To resolve V. Arnol'd's famous conjecture from the 1960's on the number of fixed points of a Hamiltonian diffeomorphism of a symplectic manifold, A. Floer has associated in the late 1980's a homology theory to the Hamiltonian action functional on the loop space of the manifold. It has long been known that Floer homology can be filtered by the values of the action functional, yielding information about metric invariants in symplectic topology (Hofer's metric, for example). We discuss recent interactions between this filtered version of Floer theory and persistent homology, providing examples of new results.