

## **abstract**

GEOMETRY/DYNAMICAL SYSTEMS SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

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Using a version of cylindrical contact homology on the complement of some Reeb orbits in a 3-dimensional contact manifold we will deduce that the existence of closed Reeb orbits with certain topological/dynamical properties implies the existence of other closed Reeb orbits. Often, a measure of the rotation of the Reeb flow around these orbits (the Conley-Zehnder index) plays a role. To illustrate this role, we will describe a particular result on the Hopf link in the tight 3-sphere in some detail. Finally, we will show how one recovers, as a corollary of this result, a version of a theorem of Angenent on geodesics in the 2-sphere.