Abstract

We study the cohomological Conley index of arbitrary isolated invariant continua for continuous maps $f\colon U \subseteq \mathbb{R}^d \to \mathbb{R}^d$ by analyzing the topological structure of their unstable manifold. We provide a simple dynamical interpretation for the first cohomological Conley index, describing it completely, and relate it to the cohomological Conley index in higher degrees. A number of consequences are derived, including new computations of the fixed point indices of isolated invariant continua in dimensions 2 and 3.

Joint work with **J.J. Sánchez Gabites** and **L. Hernández Corbato**