UNIVERSITY AT ALBANY
State University of New York

College of Arts and Sciences
Department of Mathematics and Statistics

Algebra/Topology Seminar

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Invariants for Families of Periodic Points

Thursday, February 27, 2025
3:00 p.m. in SS-256

Abstract. In this talk we investigate invariants that count periodic points of a map. Given a self map f of a compact manifold we could detect n-periodic points of f by computing the Reidemeister trace of f^n or by computing the equivariant Fuller trace. In 2020 Malkiewich and Ponto showed that the collection of Reidemeister traces of f^k for varying $k|n$ and the equivariant Fuller trace are equivalent as periodic point invariants, and they conjecture that for families of endomorphisms the Fuller trace will be a strictly richer invariant for n-periodic points.

In this talk we will explain our new result which confirms Malkiewich and Ponto's conjecture. We do so by proving a new Pontryagin–Thom isomorphism between equivariant parameterized cobordism and the spectrum of sections of a particular parametrized spectrum and using this result to carry out geometric computations.