Geometry, Groups and Dynamics/GEAR Seminar
(held at the Illinois hub of GEAR)

4:00 pm, Monday, November 13, 2017, 343 Altgeld Hall

Jenny Wilson (Stanford University)

Stability in the homology of configuration spaces

This talk will illustrate some patterns in the homology of the space F_k(M) of ordered k-tuples of distinct points in a manifold M. For a fixed manifold M, as k increases, we might expect the topology of these configuration spaces to become increasingly complicated. Church and others showed, however, that when M is connected and open, there is a representation-theoretic sense in which the homology groups of these spaces stabilize. In this talk I will explain these stability patterns, and describe higher-order stability phenomena – relationships between unstable homology classes in different degrees – established in recent work joint with Jeremy Miller. This project was inspired by work-in-progress of Galatius–Kupers–Randal-Williams.

Video