1127-55-26   **Cary L Malkiewich*** (`cmalkiew@illinois.edu`), 1409 W Green St, Urbana, IL 61801. *Periodic orbits and topological restriction homology.* Preliminary report.

This talk is about an emerging connection between algebraic K-theory and free loop spaces on the one hand, and periodic orbits of continuous dynamical systems on the other. The centerpiece is a construction in equivariant stable homotopy theory called the "nth power trace," which relies on the equivariant norm construction of Hill, Hopkins, and Ravenel. This trace is a refinement of the Lefschetz zeta function of a map f, which detects not just fixed points but also periodic orbits of f. The applications so far include the resolution of a conjecture of Klein and Williams, and a new approach for the computation of transfer maps in algebraic K-theory. These projects are joint work with John Lind and Kate Ponto. (Received January 03, 2017)

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