

# Algebra/Topology Seminar

JONATHAN CAMPBELL  
Vanderbilt University

## FIXED POINT THEORY AND THE CYCLOTOMIC TRACE

Thursday, September 20, 2018  
1:15 p.m. in ES-143

ABSTRACT. Fixed point theory has been the motivation for many of the most celebrated results of 20th century mathematics: the Lefschetz fixed point theorem, the Atiyah-Singer index theorem, and the development of étale cohomology. In this talk I'll describe work, joint with Kate Ponto, that relates classical fixed point theory to algebraic  $K$ -theory, topological Hochschild homology ( $THH$ ), and the cyclotomic trace. The relationship seems to clarify both domains, and readily suggests generalizations, via machinery of Lindenstrauss-McCarthy, that relate to dynamical zeta functions. The link turns on careful considerations of the bicategorical structure of  $THH$ .