1127-55-153 **Kate Ponto*** (kate.ponto@uky.edu), 715 Patterson Office Tower, Department of Mathematics, Lexington, KY 40508. *Refinements of fixed point invariants and refinements of the symmetric monodial trace.*

Classical fixed point invariants start with detecting fixed points of the identity map (up to homotopy) via the Euler characteristic. The Euler characteristic generalizes to the Lefschetz number and then to the Reidemeister trace. These invariants capture all of the interesting information about fixed points (up to homotopy), but they also have interesting further refinements.

The Lefschetz number and Reidemeister trace are examples of the trace in symmetric monodial categories or bicategories and this structure captures many of the fundamental results about the invariants. I will describe how the categorical traces generalize to match the interesting topological refinements.

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