1052-55-235 **Kate Ponto*** (`kponto1@nd.edu`), 255 Hurley Hall, Notre Dame, IN 46556. *Relative fixed point theory.*

If $f\colon X \to X$ is a continuous map and the Lefschetz number of f is not zero, then every map homotopic to f has a fixed point. If A is a subset of X and $f(A) \subset A$, there is a refinement of the Lefschetz number, the relative Lefschetz number, that gives more information about the location of the fixed points of f. I will describe the relative Lefschetz number and its refinement, the relative Reidemeister trace, using traces in bicategories with shadows. (Received August 28, 2009)