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Jesse Leo Kass*, Department of Mathematics, University of South Carolina, University of South Carolina, Columbia, SC 29208, and **Candace Bethea**. *How to count curves using equivariant homotopy theory?*

A major theme in modern algebraic geometry is that it is often productive to analyze a counting problem (“how many singular curves?”) by identifying the desired count as an invariant in algebraic topology and then studying it using tools from topology. One direction for current research is apply equivariant tools to study counting problems in a way that records interesting information about symmetries.

In this talk, I will explain Candace Bethea’s dissertation work on this topic. Bethea describes a count of the singular elements of a general pencil of plane conics with group action that is valued in the Burnside-ring. She does not directly use methods from algebraic topology, but explaining some unexpected results she found provides a challenge for topologists. (Received January 03, 2020)