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Jonathan Hauenstein*, University of Notre Dame, Notre Dame, IN 46556, and **Adam Mahdi**
and **Claudio Pessoa**. *The center-focus problem*.

The stability of parameterized system of ODEs is a fundamental problem encountered in various branches of science and engineering. The center-focus problem is one of the simplest and well-known stability questions. For this problem, one would like to determine conditions on the parameters to distinguish between a center and a local focus. This talk will describe an approach based on numerical algebraic geometry which we have used to solve a three-dimensional center-focus problem. (Received January 20, 2015)