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**Anne Shiu\*** (annejls@math.tamu.edu), Mailstop 3368, Texas A&M University, College Station, TX 77843, and **Badal Joshi**. *Which small reaction networks are multistationary?* Preliminary report.

A chemical reaction network gives rise to a parametrized family of polynomial systems of ODEs by way of mass-action kinetics. An important question is the following: which reaction networks admit multiple steady states, that is, which of these polynomial systems have multiple positive solutions? There is no complete answer to this question, but over the last 40 years various criteria have been developed that can answer this question in certain cases. This talk describes recent work which seeks to answer the question for small networks. Also, we highlight some open questions. (Received July 22, 2015)