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Decomposition of chemical reaction networks

I will outline the ideas behind a novel theory for analyzing the long term dynamics of chemical reaction networks with mass action kinetics based on the combination of Deficiency Theory of Horn, Johnson, and Feinberg, and the decomposition of networks into extreme subnetworks, pioneered by Clarke. This is a work in progress, but among the results that have been obtained are the formulation of new sufficient conditions for the existence of a unique asymptotically stable positive equilibrium that generalize the Deficiency Zero Theorem.