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A structured condition number for Kemeny's constant

Kemeny's constant is an interesting and useful quantifier describing the global average behaviour of a Markov chain. In this talk, we will examine the sensitivity of Kemeny's constant to perturbations in the transition probabilities of the Markov chain. That is, we consider the problem of generating a condition number for Kemeny's constant, to give an indication of the size of the change in its value relative to the size of the perturbation. We will motivate this investigation with some interesting applications of Kemeny's constant.