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Hyperopic Cops and Robbers: Cops with Vision Problems

Hyperopic Cops and Robbers (introduced by Bonato, Clarke, Finbow, Mc Inerney, and Messinger in 2017) is a variant of the original game of Cops and Robbers. In this version, the cops are farsighted making the robber invisible if inside the common neighbourhood of all of the cops. In this talk, we investigate the hyperopic cop number of a graph which is the minimum number of hyperopic cops required to guarantee the capture of the robber. First, we will explore results that upperbound the hyperopic cop number of a general graph and move to consider graphs of diameter two. We will conclude with open questions that would improve upon known bounds. This is joint work completed with Nancy Clarke, Stephen Finbow, and Margaret-Ellen Messinger.