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Finding the smallest 4-cop-win graph(s)

We study extremal graphs for the game of Cops and Robbers. It is well known that the smallest connected graph on which 3 cops are needed to capture the robber is the Petersen graph. Using both formal and computational methods, we determine the minimum order of connected 4-cop-win graphs, which confirms a conjecture of Andreae (1986), and later of Baird et al. (2014), and work towards the uniqueness of such graphs. Joint work with Samuel Yvon.