
JÉRÉMIE TURCOTTE, McGill University
Bounding the cop number of small graphs

We introduce the game of Cops and Robbers, played on graphs. We present recent progress on graphs which are extremal for the cop number. It is well known that the smallest connected graph for 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. Based on joint work with Samuel Yvon.