1135-05-2469 **Robert W Bell*** (rbell@math.msu.edu), 919 E Shaw Ln, Rm E35, Lyman Briggs College, East Lansing, MI 48864. *Weak cop number of infinite graphs.* Preliminary report.

A classical pursuit and evasion game on graphs is that of cops and robbers. One studies the minimal number of cop pawns needed to capture a robber pawn. This two player game with complete information is played in turns on a graph, where pawns occupy vertices and all of a player's pawns may move on a turn by sliding along an edge to an adjacent vertex. We study the weak cop number of Lehner: the minimal number of cop pawns needed to either capture the robber or prevent the robber from visiting any vertex infinitely often. For instance, the cop number of a ray is infinite, but its weak cop number is one. We extend results on products to this setting, establish that isometric lines can be guarded, and show how a locally finite connected graph that admits a planar embedding without vertex accumulation points has weak cop number at most three. This is joint work with Jordan DuBeau and Elizabeth Matys. (Received September 26, 2017)