

Online Ramsey numbers of ordered paths and cycles

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An ordered graph is a graph with a linear ordering on its vertices. The online Ramsey game for ordered graphs G and H is played on an infinite sequence of vertices; in each turn, Builder draws an edge between two vertices, and Painter colors it red or blue. Builder tries to create a red G or blue H as quickly as possible, while Painter wants the opposite. The online ordered Ramsey number $r_o(G, H)$ is the number of turns the game lasts with optimal play. In this talk, we analyze the asymptotic behavior of $r_o(G, P_n)$ and $r_o(G, C_n)$ for fixed G , where P_n is the monotone ordered path and C_n is an ordered cycle obtained from P_n by adding one edge.