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Erin Meger* (erin.k.meger@ryerson.ca), **Sam Spiro**, **Sean English**, **Tomas Masarik**,
Mike Ross, **Grace McCourt** and **Cedar Wiseman**. *Odd Cycle Saturation Games*.

A graph, G , is \mathcal{F} -saturated, if no subgraph of G is isomorphic to any graph $F \in \mathcal{F}$, but for any edge e not in G there is some subgraph of $G + e$ in \mathcal{F} . Whenever G does not contain such a subgraph we say G is \mathcal{F} -free. Originally proposed by Hajnal, the saturation game involves two players, Mini and Maxi, who take turns adding single edges to a graph with n vertices and no edges. The game ends when the graph is \mathcal{F} -saturated, and neither player can ever add an edge that creates a copy of any graph $F \in \mathcal{F}$. For each edge in the resulting graph, Maxi gains a point, and Mini loses a point. Thus each player is trying to maximize or minimize the number of edges at the end of the game. The game saturation number of the graph is denoted $\text{sat}_g(n; \mathcal{F})$. In this talk we consider the particular game where we forbid odd cycles. Specifically, we consider forbidding all odd cycles other than triangles and denote $\mathcal{F} = \mathcal{C}_\infty^O \setminus \{C_3\}$. We will discuss particular strategies of each player, and bound the game saturation number in a variety of cases. (Received September 17, 2019)