1135-05-2286 **Lindsay A Erickson*** (lindsay.erickson@augie.edu), 2001 S Summit Avenue, Sioux Falls, SD 57197. *Machine learning applied to edge-Nim on graphs.* Preliminary report.

In order to further the scope of combinatorial research in games on graphs, we created an online computer vs human version of edge-Nim on graphs. This version, called "Trap-tactic" (available online at traptactic.augie.edu), captures move information in an effort to sift through move sequences and isolate winning conditions, specifically on the $K_{3,3}$ graph. Upon capturing enough iterations of the game, we then apply machine learning algorithms to the data to predict the winner of the game under given initializations. This paper will discuss the range and scope of machine learning algorithms and the results generated from their application. (Received September 25, 2017)