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Lindsay A Erickson* (lerick15@cord.edu), ND , and **Warren E Shreve**
(warren.shreve@ndsu.edu). *Advances in edge Nim on graphs.*

The two-player game of Nim on graphs is played on a regular graph with positive integrally weighted edges by moving alternately from a fixed starting vertex to an adjacent vertex, decreasing the weight of the incident edge to a strictly smaller non-negative integer. The game ends when the losing player is unable to move. In this paper, we discuss some recent advances in the finding the winner of the game. Specifically, we discuss Nim on multipartite graphs, including the solution for a large class of bipartite graphs. Also, we discuss work done on the arbitrarily weighted Petersen graph, as well as provide a complete solution for unit weight hypercubes and discuss work on arbitrarily weighted hypercubes. (Received September 06, 2012)