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Joseph Frank DiNatale* (jd4732@stu.armstrong.edu), 101 Royal Oak Court, Savannah, GA 31406. *Nim on Wheels*.

Nim is a popular combinatorial game in which two players alternate removing objects from piles. We consider a variation of Nim played on graphs as proposed in Masahiko Fukuyama's *Nim on Graphs*. In this version of Nim, two players alternate traversing the weighted edges of an undirected graph. A player moves by decreasing the weight value of an edge by a strictly nonnegative integer; when an edge's weight value is less than or equal to zero, the edge terminates. The player without any available moves loses. We extend Fukuyama's results by examining Nim played on wheel graphs and its winning strategies. (Received August 01, 2012)