1145-VP-2664 **Sean Rainville*** (`ser1008@plymouth.edu`), **Eugene Fiorini** (`eugenefiorini@muhlenberg.edu`), **Tony H. W. Wong** (`wong@kutztown.edu`), **Sierra Brown** (`sierrabrown@creighton.edu`), **Spencer Daugherty** (`daugh22s@mtholyoke.edu`), **Barbara Maldonado** (`barbara.maldonado23230@gmail.com`) and **Riley Waechter** (`rsw66@nau.edu`). *Nimbers of Node-kayles on Certain Families of Graphs.*

This talk investigates the outcome of Node-Kayles games played on several families of graphs, which resulted in several new sequences published in the On-Line Encyclopedia of Integer Sequences. Using the Sprague-Grundy theorem, we are able to obtain sequences of "nimber" values for lattices (A316632), linked complete graphs (A316781), linked cycles (A316629), and other families such as generalized Petersen graphs (A316533). Furthermore, we define and prove recursion relations for these nimber sequences. Finally, we prove that Node-Kayles is equivalent to an octal game for some of these families. (Received September 25, 2018)

1