Combinatorial Game Theory Mehendi Siraj '19

You have probably heard of game theory or in particular, classical game theory. This talk will explore combinatorial game theory, which is very different from the game theory that we are most familiar with, since there is no chance, conflict, or cooperation. Like most games, combinatorial games have players, moves, rules, and winners or losers. This presentation will show how to win a combinatorial game and derive and prove an optimal strategy for players, which involves graph theory, the Sprague-Grundy function, and the binary digital sum of the heap sizes (called the Nim-sum).

> Date: Wednesday March 27, 2019 Time: 8:00 pm Place: Park 328