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Blocking Pebbles

In this talk we introduce the game of Blocking Pebbles. The ruleset for this game was inspired by the related graph theoretic notion developed by Lagarias and Saks. Blocking Pebbles is played on a directed acyclic graph with some starting arrangement of blue and red pebbles assigned to the vertex set. On her turn, blue may either (1) pick up at least two blue pebbles on some vertex and move all but one (throw one away as a "toll") to an out-neighbor; or (2) pick up at least one blue pebble and move it to an in-neighbor. In either type of move, blue is not allowed to move pebbles to a vertex containing any number red pebbles. Red's moves are similar.

We will look at several game values achievable as Blocking Pebbles positions. We will also briefly comment on the impartial version, and report on the game's complexity.