Some $\mathcal{P}/\mathcal{N}$-positions and the CGH-classification of CRIM

Ina Bašić, University of Primorska; Eric Gottlieb*, Rhodes College; Matjaž Krnc, University of Primorska

Column-Row Impartial Merge, or CRIM, is an impartial game in which a board position is the Young diagram of a partition and a move consists of the removal of a single row or column. If the row or column removed is neither the first nor last, then the remaining pieces are merged together to form a single Young diagram. We describe $\mathcal{P}$- and $\mathcal{N}$-positions for certain classes of partitions, including partitions with two or three parts, rectangles, hooks, hook-squares, thick hooks, odds-are-even and evens-are odd, staircases, and melds of balanced rectairs. In addition, we identify CRIM's place in the Conway-Gurvich-Ho classification scheme by showing that it is neither returnable nor domestic.