

Lessons in Losing: An Introduction to Misère Game Theory

Combinatorial games are played by two players who alternate moves; there are no elements of chance, no hidden information, and no ties. Under *normal play* the last player to move wins the game, while under *misère play* the first player unable to move wins. Normal-play games have been extensively analyzed and exhibit ‘nice’ mathematical structure, including a notion of addition that forms the set of games into an abelian group. Misère games have been much less studied, as almost all of the intuitive algebraic structure of combinatorial game theory seems to fall apart when we make the last player to move the loser. This talk will introduce combinatorial games in general before highlighting some of the challenges inherent in misère play, with examples from the game of DOMINEERING.