

Title: Randomness in Maker-Breaker games
Gal Kronenberg
Tel Aviv University

Abstract: We consider two random versions of Maker-Breaker games.

The first setting is the **random-turn** Maker-Breaker games, firstly introduced by Peres, Schramm, Sheffield and Wilson in 2007. A *p-random-turn Maker-Breaker game* is the same as an ordinary Maker-Breaker game, except that instead of alternating turns, the players toss a coin before each turn to decide the identity of the next player to move (the probability of Maker to move is p).

In the second setting we consider the biased **random-player** Maker-Breaker game. In this version, one of the players plays according to an optimal strategy, while the other plays randomly. Under this setting we actually have two different games: the $(m : 1)$ random-Maker game and the $(1 : b)$ random-Breaker game. We call m and b the bias of the game.

We analyze the two random versions of several classical games such as the game Box (introduced by Chvátal and Erdős in 1987), the Hamilton cycle game and the k -connectivity game (both played on the edge set of K_n). For each such game, we show an efficient strategies for the typical winner of the game.

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