

# Games: Fair versus Biased

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## Abstract

In a recent paper Alon, Krivelevich, T. Szabó, and Spencer raised the following innocent-looking problem; it is an Underdog version of the Degree Game. Two players, Maker and Breaker are playing on the complete graph  $K_n$ . In each turn Maker takes one new edge and colors it red, and Breaker takes 2 new edges and colors them blue. Can Maker guarantee that, at the end of the play, each degree of the red graph is about  $n/3$ ?

They could solve the fair (1 : 1) version, but the underdog version led to unexpected technical difficulties. In my talk I give a positive solution to this problem, and explain how to generalize it for the general biased case.

At the end of my talk I will discuss the problem of Fair versus Biased for many other games.

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