

1162-05-66

Eric Sundberg* (sundberg@oxy.edu) and **Ramin Naimi**. *Bin-based pairing strategies for the Maker–Breaker game on the boolean hypercube with subcubes as winning sets*. Preliminary report.

We consider the Maker–Breaker positional game on the vertices of the n -dimensional hypercube $\{0, 1\}^n$ with k -dimensional subcubes as winning sets. We describe a pairing strategy which allows Breaker to win when $k = n/4 + 1$ in the case where n is a power of 4. Our results also imply the general result that there is a Breaker’s win pairing strategy for any $n \geq 3$ if $k = \lfloor \frac{3}{7}n \rfloor + 1$. (Received August 22, 2020)