

## On Maximal Scores in Round-Robin Tournaments

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In a classical round-robin tournament, each of  $n$  players plays against each of the other  $n - 1$  players. Denote by  $X_{ij}$  the score of player  $i$  in the game with player  $j$ ,  $j \neq i$ . Assume that all pairs of scores  $(X_{12}, X_{21}), \dots, (X_{1n}, X_{n1}), \dots, (X_{n-1,n}, X_{n,n-1})$  are independent. A general round-robin model is considered, where  $X_{ij} + X_{ji} = m_{ij}$ ,  $X_{ij} \in \{0, 1, \dots, m_{ij}\}$  with an arbitrary probabilities  $\{p_{ij}(u)\}$ , where  $p_{ij}(u) = P(X_{ij} = u)$ . Let  $s_i = \sum_{j=1, j \neq i}^n X_{ij}$  be the score of player  $i$  ( $i = 1, \dots, n$ ) after playing with all  $n - 1$  opponents. In this work we study the rate of increase of the expected (standardized) maximal score ( $\max\{s_1, \dots, s_n\}$ ).

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