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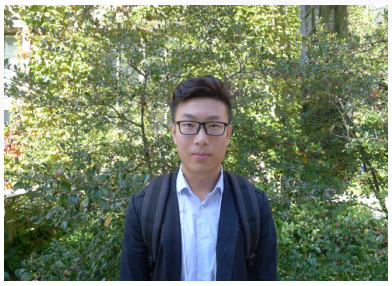
DISSERTATION PRESENTATION AND DEFENSE

Full Ranking

WHEN
February 9, 2022
4:00 PM, CST

WHERE
Via ZOOM
ZOOM information will be provided in the email announcement for this seminar.



Pinhan Chen, PhD candidate

Given partially observed pairwise comparison data generated by the Bradley-Terry- Luce model, we study the problem of full ranking. We will first briefly review our results about top-k ranking, revealing the optimality of the MLE and the suboptimality of the Spectral method. Then, for full ranking, we introduce a divide-and-conquer algorithm. The algorithm first divides all players into groups of similar skills and then computes local MLE within each group. The statistical property of this algorithm is derived through a careful approximate independence argument between the two steps. The error rate under the Kendall's tau distance matches the lower bound which exhibits a phase transition phenomenon.

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