

MASTER'S SEMINAR ANNOUNCEMENT
Department of Statistics

The Bradley-Terry Model in Baseball Analysis

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5734 S. University Avenue

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ABSTRACT

I will apply the Bradley-Terry model, which is used in pair-wise comparison experiments, to Major League Baseball results for every season since 1900. This model gives team ability measures that account for the difficulty of every team's schedule, as well as the effect of home-field advantage. Using the team strength coefficients, we can see evidence for the improvement in overall league ability in baseball over the last one hundred years. I will also propose a rough list of the 50 best National League and 50 best American League teams in history by standardizing the team strength estimates by the 5-year moving average of league variation. I will suggest a similar method to compare home-field advantage between sports that does not depend on scoring distribution.