The math says Red Sox have a big edge in the World Series, according to NJIT professor

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Now that the World Series is about to begin, NJIT math professor Bruce Bukiet has announced the probability of each of the contenders winning the best 4 out of 7 game contest. "The Boston Red Sox have a nearly 70% chance of winning the series", says Bukiet. But he gives the caveat that the St. Louis Cardinals have defeated both the competition and his mathematical model in each of their previous series.

Bukiet's mathematical model said that the Los Angeles Dodgers, the Detroit Tigers, the Boston Red Sox and the Pittsburgh Pirates had the edge in the League Division series. Of these, only the Pirates were defeated (by the Cards). In the League Championship Series, the model said that the Red Sox and Dodgers had the edge, but once again, the Cards confounded the model by defeating the Dodgers. "We'll see if they can overcome a mathematically better team for the third straight series – striking the model out."

Going into the series Bukiet says the Red Sox have the edge in 6 of the 7 games with only game 5 in St. Louis with Adam Wainwright facing John Lester favoring the Cards. Details of his computations can be found at http://m.njit.edu/~bukiet/baseball/baseball.html. There you can see how his projections for the 2013 baseball season worked out compared to the "experts". (His projections placed him first for the third year in four at Baseballphd.net's annual contest to pick the teams who would make it to the playoffs.) There are also regular updates as to how the probabilities of each team winning the World Series change as the series progresses. For example, if the Cards win game 1 in Boston, their chance of winning

the series increases to nearly 46% from the 31% chance they have going in.

Bukiet uses performance data from the entire 2013 regular season for each team's post-season roster of players in order to perform his computations. The relatively small amount of data for one of the Cards' starting pitchers (rookie Michael Wacha) may be part of the difficulty Bukiet's model has had with the Cards this post-season. Others include that "anything can happen in short series, especially in close games and extra-inning games," he noted.

On Bukiet's website, he provides the likelihood of each team taking the series in a given number of games. Going into the series, the most likely outcome (24%) is for the Red Sox to defeat the Cards in 7 games. The Cards' best chance (12%) is to win the series in 6.

This is Bukiet's 13th year using his model to determine whether it is worthwhile to wager on games each day during the baseball season. His picks (posted on http://www.egrandslam.com) have led to positive results for 9 of the 13 years (counting 2013 positive performance).

The method employs a Markov process approach which he originally published in the journal Operations Research. The method enables one to assess prospective trades and evaluate who should win the Most Valuable Player and Cy Young Awards among various other applications. Bukiet's method to compute who deserves the MVP and Cy Young awards along with the results of the computations have appeared in the International Journal of Performance Analysis in Sports. The model computes the probability of a team with given hitters, bench, starting pitcher, lineup, and relievers scoring any number of runs and adjusts for home field advantage to compute the chance each team has to win a game.