

Phillies, Rangers, Yanks, Giants to win, says NJIT math guru

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With the Major League Baseball Division Series set to begin, associate math professor Bruce Bukiet at NJIT is performing his analysis of the probability of each team advancing to the League Championship Series. "Going into these series, the Philadelphia Phillies have a 64 percent chance of defeating the Cincinnati Reds in their best of five game series," he said.

"The Texas Rangers, New York Yankees and San Francisco Giants have slight advantages to win series over their opponents, the Tampa Bay Rays, Minnesota Twins and Atlanta Braves respectively in the first round Division Series contests.

The blog, Baseball PhD, recently named Bukiet its 2010 Predictions Champ <http://tinyurl.com/38tonqw> based upon Bukiet's predictions of Major League Baseball wins.

"Anything can happen in short series, and this year the advantages are small so a few key bounces can make all the difference between going on to the League Championship Series or going home for winter," Bukiet noted. "The teams that make it this far are the best teams in baseball so the matches are usually pretty even." Bukiet updates the probabilities of each team taking their series throughout the [Major League Baseball](http://m.njit.edu/~bukiet/baseball/playoffs10.htm) post-season at <http://m.njit.edu/~bukiet/baseball/playoffs10.htm>

According to Bukiet's [mathematical model](#), the Phillies have an 18

percent chance of sweeping their series against the Reds, a 25 percent chance of winning in 4 games, and a 21 percent chance of winning in 5 games for a total 64 percent chance of winning the series. The Reds' chances of sweeping the Phils is 8 percent, while their chances of winning the series in 4 games is 13 percent and winning in 5 games is 15 percent for a 36 percent total chance of making it to the next round.

The Texas Rangers have a 54 percent chance of defeating the Tampa Bay Rays; The Yankees have a 53 percent chance of defeating the Minnesota Twins and the San Francisco Giants have a 52 percent chance of defeating the Atlanta Braves in the other 3 Division Series. More detailed information on the results and assumptions and updates on how the probabilities change will be updated at <http://m.njit.edu/~bukiet/baseball/playoffs10.htm>.

This is Bukiet's 10th year using his model to determine whether it is worthwhile to wager on games each day during the baseball season. His picks (posted on www.egrandslam.com) have led to (slightly) positive results for 7 of the 10 years (counting 2010's positive results). He has also used the model to predict how teams should perform during a baseball season and these results have compared favorably with so-called [baseball](#) experts over the years, including 2010.

The model, originally developed by Bukiet and others, was published in Operations Research. More recent improvements were published in the International Journal of Performance Analysis in Sports. Bukiet's model computes the probability of a team winning a game by considering specific hitters, bench, starting pitcher, lineup, relievers and home-field advantage. "Winning the first game in a short series can change a team's fortunes markedly," Bukiet noted. For example, if the Twins win the first game against the Yankees, their chance of winning the series jumps from 47 to 65 percent.

Provided by New Jersey Institute of Technology

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