Mathematician foresees romps for Major League Baseball's American League in 2008

NJIT's indefatigable math professor Bruce Bukiet is once again opining on outcomes for this season's Major League Baseball teams. His picks are based on a mathematical model he developed in 2000. His goal is two-fold.

"I use my mathematical model to determine whether it is worthwhile to wager on games during the baseball season," he said. "But I also use my system to combat math illiteracy. Baseball can be the world's best math lesson."

Bukiet, a professor whose mantra is "A day without math is like a day without sunshine," has received countless teaching honors from NJIT. He admits that his picks are not always correct. "Hey, sometimes the players just don't perform the way they should, every fan knows that," he said.

But getting people to think about probability and the other important aspects of math in their lives makes Bukiet feel like a winner every time.

On a more upbeat note, Bukiet's system for recommending wagers has produced positive results for five of the seven years he has posted results. His model provides the number of games each Major League Baseball team should win in 2008. Bukiet, an avid Mets fan, is also associate dean of NJIT's College of Science and Liberal Arts.

Operations Research published Bukiet's original mathematical model on which his predictions are based. The model computes the probability of a team winning a game against another team with given hitters, bench, starting pitcher, relievers and home field advantage. Bukiet has appeared on CNN Headline News, the Jerusalem Post and Fox Radio's Roger Hedgecock Show, KOGO, San Diego and others.

His predictions follow, including expected number of wins for each team.

"The New York Yankees, Boston Red Sox, Detroit Tigers and Los Angeles Angels should make the playoffs in the American League (AL) in 2008 with the other teams lagging well behind," he said.

"The National League (NL) should see much tighter races, with the New York Mets and Atlanta Braves winning the East and the wild card, respectively, while in the Central and West Divisions only the Pittsburgh Pirates and the San Francisco Giants have no real shot of making it to the post-season."

The Yankees and Red Sox should tie for baseball's best record with 98 wins, with both teams making the post-season, one as AL East winner and the other as the AL wild card team. The next closest team in their division, the Toronto Blue Jays, should wind up 12 games back. In the AL Central Division, the Tigers should win, besting the Cleveland Indians by 9 games, while the Angels should win AL West by 14 games over the Seattle Mariners.

In the National League Central Division, Bukiet's model calls for the top five teams to be within five wins of each other. With the model's typical error, any team but the Pittsburgh Pirates (with 71 wins) could eke out the division championship. Bukiet calls for the Milwaukee Brewers to win 84, the Chicago Cubs to win 83, the Cincinnati Reds to win 81, the St. Louis Cardinals to win 80 and the Houston Astros to win 79 games.

In the NL West, the contest should be closer, said Bukiet, whose model has the top four teams within three

wins of each other. The Colorado Rockies and San Diego Padres, who had to play a tie-breaker to decide the wild card team in 2007 look like they might have to do it again, playing for the NL West title, both winning 85 games in 2008. The Arizona Diamondbacks should be close behind with 83 wins and the Los Angeles Dodgers can expect 82. Only the San Francisco Giants should lag with 75.

The expected number of wins for each team is:

-- AL East: Yankees – 98; Red Sox – 98; Blue Jays – 86; Rays – 75; Orioles – 63;
-- Central: Tigers – 96; Indians – 87; White Sox – 79; Twins – 74; Royals 63;
-- AL West: Angels – 92; Mariners – 78; A's – 75; Rangers – 70;
-- NL East: Mets – 92; Braves – 89; Phillies – 84; Nationals – 73; Marlins – 70;
-- NL Central: Brewers – 84; Cubs – 83; Reds – 81; Cards – 80; Astros – 79; Pirates – 71;
-- NL West: Rockies – 85; Padres – 85; Diamondbacks – 83; Dodgers – 82; Giants – 75;

"These results give a guide of how teams ought to perform during the season but there are so many unknowns, especially concerning trades, injuries and how rookies will perform that cannot be taken into account," added Bukiet.

Bukiet's main areas of research have involved mathematical modeling of physical phenomena, including detonation waves, healing of wounds, and dynamics of human balance. He has also applied mathematical modeling to sports and gambling, in particular for understanding baseball and cricket.

Source: New Jersey Institute of Technology