

- Customer Care
- Place an Ad
- Buy Photos
- E-mail Updates

- TOPICS**
- 518 Moms
 - Home Decor
 - Local Arts

timesunion.com

timesunion.com Web Search by YAHOO! **SEARCH**

[HOME](#) [LOCAL NEWS](#) [U.S. & WORLD](#) [POLITICS](#) [SPORTS](#) [BUSINESS](#) [ENTERTAINMENT](#) [LIFE](#) [BLOGS](#) [JOBS](#) [REAL ESTATE](#) [CARS](#) [CLASSIFIEDS](#) [HELP](#)

[Calendar](#) | [Archives](#) | [Obituaries](#) | [Moms](#) | [Home Decor](#) | [The Advocate](#) | [Photos](#) | [Videos](#)

ARCHIVE

[Return to Search Results](#) | [New search](#)

TIMES UNION ALL THE TIME

RSS

- E-mail news alerts
- RSS news feeds
- Get paper at home
- Headlines on your site
- TURN feedback
- Times Union E-edition

GREGORY DOES PROJECT FOR LOVE OF GAMING THEORY

Softball player for Russell Sage uses math to analyze baseball

ALAN WECHSLER STAFF WRITER

Section: Sports, Page: B1

Date: Friday, March 13, 2009

TROY -- Rebecca Gregory, a senior at Russell Sage College, has two passions -- mathematics and baseball.

Last fall, she combined her love of both by taking a theoretical gaming model and applying it to predict baseball scores. After plugging in numbers from the 2008 Mets and Yankees seasons, she found that the theory published in a recent Mathematics Magazine article actually fit the real world.

While not quite a home run for those who would use math to predict baseball game outcomes, her work won her a place at the 23rd National Conference on Undergraduate Research held in April at the University of Wisconsin -- one of 10 students from The Sage Colleges to be invited to present.

And she got an "A" on the project.

In her paper, Gregory used the model to determine how likely it was for Mets or Yankees games to go into extra innings. In her analysis, she also determined the odds of scoring a first and second run.

She was surprised how accurate the results were.

"I expected that the Mets and Yankees would follow the model," she said. "But I did not expect it to be that close."

Thomas Sweeney, a Sage math professor who advised her during the semester-long project, said the model she used involved "quasigeometric distribution." That's a gaming theory term that refers to a situation "in which the distribution is geometric for all trials except the first."

The preceding sentence might make no sense upon first read -- until one realizes that a baseball diamond with bases loaded is a geometric design. But earlier "trials" -- players at bat -- won't match that design because each inning starts with empty bases.

Still don't get it? Don't worry. The bottom line is that Gregory determined that a baseball team, in theory, has an 11.5 percent chance of scoring two runs during a game. When analyzing the data for the 2008 Mets, she found the team scored two runs 11.9 percent of the time. The Yankees score was a much smaller percentage.

"She was right in the ballpark," her professor said. "That's pretty good confirmation that the theory does predict the reality."

She also determined that, theoretically, 10.2 percent of Major League games should reach extra innings. But in reality 9.2 percent of all baseball games went into extra innings. And there was more, having to do with the odds of getting a first and second run.

While baseball fans might dismiss her findings as irrelevant to the game, Sweeney said there are practical applications for statistics in sports. In fact, an increasing number of baseball teams in the past decade have hired statisticians to figure out things like how to predict what kind of pitch a certain pitcher is likely to use -- or, for a pitcher, how to choose the best pitch against a certain batter. It's a practice known as "sabermetrics."

Gregory, a member of the Sage Gators softball team, is about to graduate after only three years in college, with a GPA somewhere near 4.0. She plans to continue in graduate school next year -- and to continue her work on sports mathematics.

"Baseball is fun," she said. "But I like statistics, because the numbers don't lie to you."

baseball is fun," she said. "But I like statistics, because the numbers don't lie to you."
Alan Wechsler can be reached at 454-5469 or by e-mail at awechsler@timesunion.com.

[Email this story](#)

Ads by Yahoo!

TIMESUNION.COM Home Local News Your Town Politics Nation/World Opinion Sports Business	Blogs Weather Traffic Calendar Life Restaurants Movies TV Guide Travel	Obituaries Births Weddings/Celebrations Lottery Special Reports Photo Galleries Video Comics Contests	Corrections Archives Data Center TOPICS Home Decor 518 Moms Entertainment Local Arts	MARKETPLACE Jobs Real Estate Cars Shopping Classifieds Yellow Pages Today's Print Ads Place an Ad	HOME DELIVERY Newspaper Subscription Customer Care Source Card OTHER EDITIONS Mobile site Info E-Edition E-mail Newsletters RSS Feeds	SERVICES Help Center Contact Us Hope Fund Copyright Classroom Enrichment Online Store Info for Advertisers
---	--	---	--	--	---	--

[Privacy Rights](#) | [Terms of Service](#)

All Times Union materials copyright 1996-2008, Capital Newspapers Division of The Hearst Corporation, Albany, NY

