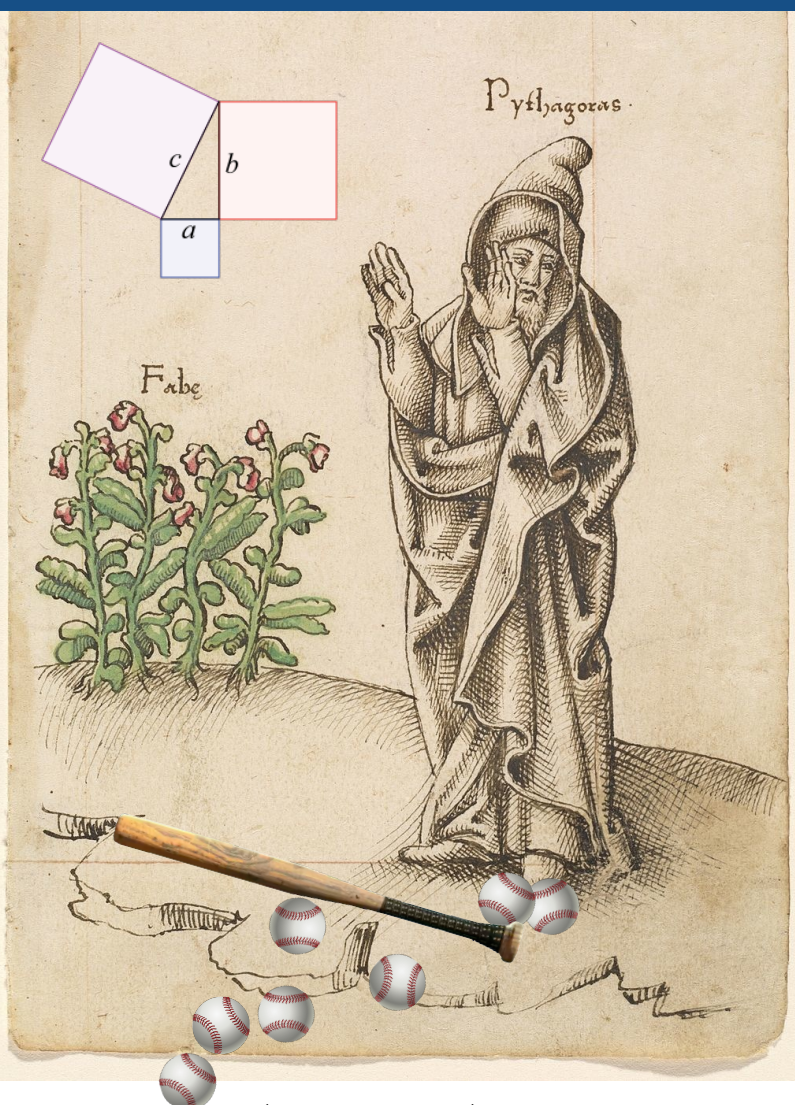


Public Lecture

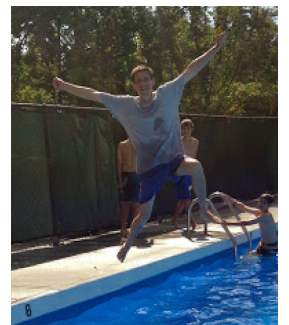


Pythagoras at the bat: an introduction to statistics and modeling

Steven J. Miller
Williams College

Let RS (resp., RA) denote the average number of runs scored (resp., allowed) in a baseball game by a team. It was numerically observed years ago that a good predictor of a team's win-loss percentage is $RS^2 / (RS^2 + RA^2)$, though no one knew WHY the formula worked. We review elementary concepts of probability and statistics and discuss how one can build and solve a model for this problem. In the course of investigating this problem we discuss how one attacks problems like this in general (what are the features of a good model, how to solve it, and so on). The only prerequisite is simple calculus (no baseball knowledge is required, though Red Sox knowledge is always a plus).

Steven Miller earned his BS in mathematics and physics from Yale and his PhD in mathematics from Princeton. He has taught at numerous colleges and universities, including Brown, Mount Holyoke, NYU, The Ohio State University, Princeton, Smith and Williams. He is the author of over 100 papers in accounting, computer science, economics, geology, marketing, mathematics, physics, sabermetrics, and statistics, as well as five books. He has taught continuing education classes at the Teachers As Scholars program for years, and been supported by multiple NSF grants for both research and expository writing. He has also worked with numerous Michigan students (undergraduate and graduate) over the years, and hopes to work with more this summer at the Williams College SMALL REU.



Steven Miller, joyfully wearing his Michigan Math t-shirt



This event is organized by Sarah Koch (kochsc@umich.edu), and it is sponsored by the U(M) Department of Mathematics, the National Science Foundation, and the Phi Beta Kappa Society.

free and open to the public
all are welcome!

Weds, Nov 29, 2017
5:30pm, 1324 East Hall