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# Keeping Up-to-Date with Bayes (Abstract)

Kristin Duncan

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The Department of Mathematics at the University of Dayton presents

### **Undergraduate Mathematics Day**

Saturday, November 7, 2009



# Keeping Up-to-Date with Bayes

## Dr. Kristin Duncan

San Diego State University

**Abstract:** Bayes' theorem, a rule for updating probabilities as new information is obtained, may be over two centuries old but it has been the driving force behind many of the most significant recent advances in statistics and other sciences. In this talk we will review Bayes' theorem and the evolution of Bayesian inference. The talk will touch on the philosophical differences between Bayesians and frequentists which caused controversy and heated debate in the statistics community for years. We will illustrate how Bayesian methods can be applied to analyzing criminal evidence, determining the best way to conduct clinical trials, and developing more useful software.

#### About the speaker:

Dr. Duncan, who received her B.S. (1999) from the University of Dayton and her Ph.D. (2004) from The Ohio State University is a faculty member in the Department of Mathematics and Statistics at San Diego State University. Her research interests are in Bayesian models, item response models, and survey methodology.

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