

DEPARTMENT OF STATISTICS AND BIOSTATISTICS

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Bayesian Modelling via Goodness-of-fit

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3:20 - 4:20pm

Light refreshments will be served

**110 Frelinghuysen Road
Hill Center, Room 552**

Abstract: The two key issues of modern Bayesian statistics are: (i) establishing principled approach for distilling statistical prior that is consistent with the given data from an initial believable scientific prior; and (ii) development of a consolidated Bayes-frequentist data analysis workflow that is more effective than either of the two separately. In this paper, we propose the idea of “Bayes via goodness-of-fit” as a framework for exploring these fundamental questions, in a way that is general enough to embrace almost all of the familiar probability models. Several examples, spanning application areas such as clinical trials, metrology, insurance, medicine, and ecology show the unique benefit of this new point of view as a practical data science tool.

Bio: I am currently an Assistant Professor in the Statistical Science department of Fox Business School at Temple University. I received my PhD from Texas A&M University. My advisors were Prof. Emanuel Parzen and Prof. S. N. Lahiri.

My major research focus has been to develop modern notations and a new general theory of nonparametric statistical modeling that provide the required foundation for constructing “United Statistical Algorithms,” applicable for both small and big data with different data types and increasingly complex structures: univariate, multivariate, time series, spatial, image and graph data — *Nonparametric Data Science*. In simple words, I am designing the “**LEGO bricks**” of Statistical Science.

I received Master’s degree in Statistics from the Indian Institute of Technology (IIT Kanpur) and Bachelors of Statistics from the University of Calcutta.

