

From Data to Decisions and Discoveries

by Prof Xuming He, University of Illinois at Urbana-Champaign

(with contributions from Douglas Noe)

IMS School
Lecture

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In life, we often have to make decisions under uncertainty. How early do you have to leave home for school so that you can arrive on time? Should you convince your parents to buy certain lottery tickets? The list can go on and on. With a mathematical and analytical mind, you can use data to make smart decisions.

Good data analysis can also lead to exciting discoveries in many different areas, including astronomy, medicine, and marketing. Scientists use data to study how things relate to one another and to identify important factors that contribute to a long life. Yes, you might even discover that taking time out for fun activities can improve your academic performance!

In this lecture, I cannot make any decisions or discoveries for you, but I will show how powerful it can be when data and mathematics are combined. In a few years, you will see that this combination does lead to an important scientific discipline called statistics. Why not start practicing statistical thinking now?



About the Speaker

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Professor Xuming He received his Ph.D. in Statistics from the University of Illinois in 1989. He was a lecturer at the National University of Singapore before he joined the University of Illinois faculty in 1993. He served as Director of Illinois Statistics Office from 2000-2003, and currently serves as Program Director of Statistics at the National Science Foundation, USA. His research focuses on statistical inference for regression models, with applications to the speech and hearing science, epidemiology, genomics, and other areas of science and engineering. He is an elected Fellow and a Council member of the Institute of Mathematical Statistics, a Council member for the International Chinese Statistical Association, and serves on the editorial boards of premier journals of statistics.

Douglas Noe is a post-graduate student and Research Assistant to Professor He at the Department of Statistics, University of Illinois.