

综合报告会

Lecture

国家数学与交叉科学中心

Time: 2:00 pm, July 22

Venue: 712, Siyuan Building

Some random thoughts on Big Data

Speaker: Prof. Jianqing Fan

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Abstract:

Big Data arise from many frontiers of scientific research and technological developments. They hold great promise for the discovery of heterogeneity and the search for personalized treatments. They also allow us to find weak patterns in presence of large individual variations. Salient features of Big Data include experimental variations, computational cost, noise accumulation, spurious correlations, incidental endogeneity, and measurement errors. These issues should be seriously considered in Big Data analysis and in the development of statistical procedures. As an example, we offered here the sparsest solution in high-confidence sets as a generic solution to high-dimensional statistical inference and we derived a useful mean-square error bound. This method combines naturally two pieces of useful information: the data and the sparsity assumption.

Brief CV:

Jianqing Fan is Frederick L. Moore Professor of Finance, Professor of Statistics, Chairman of Department of Operations Research and Financial Engineering, and Director of Committee of Statistical Studies at Princeton University, where he directs both financial econometrics and statistics labs. He was the past president of the Institute of Mathematical Statistics and International Chinese Statistical Association. He was invited speaker at the 2006 International Congress of Mathematicians and a core member of the committee on selection of the invited speakers for Probability and Statistics for the 2010 International Congress of Mathematicians. He is co-editing Journal of Econometrics and is an associate editor of Econometrica and Journal of American Statistical Association, and was the co-editor of The Annals of Statistics, Probability Theory and Related Fields and Econometrics Journal. After receiving his Ph.D. from the University of California at Berkeley, he has been appointed as assistant, associate, and full professor at the University of North Carolina at Chapel Hill (1989-2003), professor at the University of California at Los Angeles (1997-2000), and professor at the Princeton University (2003--). His published work on statistics, economics and finance has been recognized by The 2000 COPSS Presidents' Award, The 2007 Morningside Gold Medal of Applied Mathematics, Guggenheim Fellow in 2009, and election to Academician of Academia Sinica and follow of American Associations for Advancement of Science. His research interest includes financial econometrics, portfolio selection, and risk management.