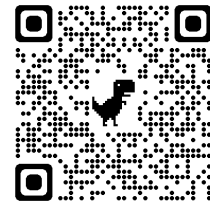


VIRGINIA TECH DEPARTMENT OF STATISTICS COLLOQUIUM



STATISTICAL DESIGNS FOR NETWORK A/B TESTS

QIONG ZHANG

FEBRUARY 23 | 3.30 PM (ET)

IN-PERSON SEMINAR

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Abstract

A/B testing is a common controlled experiment approach used to compare two versions of internet-based products. IT companies often conduct A/B tests on their users who are connected in a social network. The users' responses could be related to the network connection, leading to two typical assumptions: network interference and network correlated outcomes. I will discuss the general problems of network A/B testing design under these two assumptions. Further, I will talk about an optimal design approach under the assumption of network correlated outcomes and show the value of optimal design of A/B tests in balancing the network and covariates.



Bio

Dr. Qiong Zhang is an assistant professor in the School of Mathematical and Statistical Sciences at Clemson University. Previously, she was an assistant professor of statistics at Virginia Commonwealth University in 2014–2018. Dr. Zhang received a B.S. degree in statistics from Nankai University and an M.S. degree in statistics from Peking University in 2007 and 2009, respectively. She received her Ph.D. degree in statistics from University of Wisconsin-Madison in 2014. Dr. Zhang's research interests include uncertainty quantification, design and analysis of computer experiment and statistical designs for web experiments.