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Professor
University of Kentucky
Lexington, KY

Olmsted Hall 420
March 12th 2019
3:45-4:45pm

*Reception in Olmsted 1331
at 3:15 P.M.*



**“EXPECTED CONDITIONAL
CHARACTERISTIC FUNCTION-
BASED MEASURES FOR TESTING
INDEPENDENCE”**

FOR MORE INFORMATION ABOUT THIS SEMINAR, VISIT STATISTICS.UCR.EDU/COLLOQUIA.HTML

Abstract

We propose a novel class of independence measures for testing independence between two random vectors based on the discrepancy between the conditional and the marginal characteristic functions. If one of the variables is categorical, our asymmetric index can be redeemed as the between group dispersion in a kernel ANOVA decomposition and leads to more powerful tests than those relying on symmetric measures. In addition, our index is also applicable when both variables are continuous. We develop two empirical estimates and obtain their respective asymptotic distributions. We illustrate the advantages of our approach by numerical studies across a variety of settings.

Biography

Xiangrong Yin is Professor of Statistics at the University of Kentucky since 2014. He obtained his PhD degree in 2000 at the University of Minnesota. He was assistant professor, associate professor and professor at the University of Georgia (2000-2014).

His paper with his adviser R. D. Cook won the 2001 The Inaugural Editor's Award for the best article published in the Australian and New Zealand Journal of Statistics. His paper with his student Yuan Xue won The Journal of Nonparametric Statistics Best Student Paper Prize 2015.

He was an associate editor for *Statistica Sinica* (2014-2017) and *Statistics and Probability Letters* (2010-2014). He has been an associate editor since 2010 for *Journal of Nonparametric Statistics*.

He has guided thirteen PhD students and his research are partially supported by NSF grants, his research interests are sufficient dimension reduction, multivariate analysis and big data analytics. He has published/accepted 63 papers, including *JASA*, *JRSSB*, *Biometrika* and *AOS*.