



Joint Institutskolloquium and Munich Econometrics Seminar

Correlation Robust Inference When Economic Distance Is Latent

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(Princeton University)

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Department of Statistics, Ludwigstr. 33, Seminar Room 144

and online via Zoom [\[Link\]](#)

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Adjusting standard errors for correlations induced by economic distance would often be desirable, but economic distance between observations is typically not observed. We overcome this difficulty by exploiting information in auxiliary variables, which we assume to be persistent in the same latent “economic distance” geometry that governs the correlation in the target variable. We use the variogram of the auxiliary variables to define a family of potential covariance matrices for the target variable, and construct a projection-type HAR t-test. Our main theoretical result shows that this test controls asymptotic size for general stationary weak dependence in the target variable. In an application to zip-code-level U.S. socioeconomic data, the new standard errors are substantially larger than those produced by existing methods, including methods based on geographic locations.

About the Speaker:

Ulrich Müller is a Professor of Economics at Princeton University. He received his PhD at the University of St. Gallen in 2002 and has been at Princeton since 2003. His research is in econometric theory with interests in time series and forecasting, cluster dependence, spatial dependence, Bayesian inference and extreme value theory. Ulrich is a fellow of the Econometric Society, a fellow of the Journal of Econometrics, and a fellow of the International Association of Applied Econometrics. He served as an associate editor of Econometric Theory, as foreign editor to the Review of Economic Studies and as an associate and co-editor of Econometrica.