

Transportation Center Seminar Series presents.....

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Normalization and Disaggregation of Network-GEV Models

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4:00 – 5:00 pm

Refreshments available at 3:30 pm

**The Transportation Center
Chambers Hall
Lower Level Conference Center
600 Foster, Evanston**

Abstract

Generalized extreme value (GEV) models provide a convenient way to model choice behavior that is consistent with utility maximization theory, but the development of specific new models within the GEV family has been slow, due to the difficulty of ensuring new formulations comply with all the GEV rules. The network GEV structure provides a tool to quickly generate new models in the GEV family, without the burden of complex analysis of the new model to ensure its properties. However, the plethora of parameters in the model requires that numerous restrictions be imposed to allow for model identification, and different network topographies require different sets of restrictions to maintain an unbiased model in the estimation process. This presentation will examine a few different methodologies for imposing those restrictions, and how those restrictions can be leveraged to create a new type of model with a novel disaggregate correlation structure among alternatives.

Biography

Mr. Newman has completed his Ph.D. in Civil Engineering at Northwestern University. He has been awarded fellowships from the U.S. Department of Transportation and Homeland Security, as well as the Eno Transportation Foundation and Northwestern Transportation Center. He also holds a Masters of Public Administration and a BS in Policy Analysis from Cornell University. Between his studies at Cornell and Northwestern, Mr. Newman worked for several years in both the public and private sectors, on projects ranging from public finance to labor relations to economic development. He is a member of the Disaster Action Team for the American Red Cross of Greater Chicago, and has served as a volunteer firefighter. Newman's primary research interests include the development of advanced discrete choice modeling techniques, and transportation policy making. In particular, he is interested in very large scale models, which are of interest in epidemiological research, where it is ideal to model the behavior of hundreds of millions of people simultaneously.