Biography:

Dr. Garrow is an Associate Professor at the Georgia Institute of Technology. She earned her Ph.D. at Northwestern University, with an emphasis on travel demand modeling and airline passenger behavior. Her dissertation won first prize in the 2004 Aviation Applications Section of INFORMS and honorable mention in the 2004 Eric Pas dissertation competition sponsored by the International Association of Travel Behavior Research. She is the 2009 recipient of the Council of University Transportation Centers-American Road & Transportation Builders Association (CUTC-ARTBA) New Faculty Member Award and a 2009 CAREER recipient. She is also a 2013 recipient of the ASCE Walter L. Huber Research Prize. Dr. Garrow currently serves as Past President of the Transportation Science and Logistics Society of INFORMS and Vice President of AGIFORS.

Abstract:

A new parameter estimation routine for estimating multinomial logit models for which one alternative is completely censored is being developed in this paper. The method is based on decomposing the log likelihood function into particular marginal and conditional components. Simulations based on industry hotel data clearly demonstrate the superior computational performance of the method over existing methods that are capable of estimating price effects. The study considers extensions of this methodology to Generalized Extreme Value (GEV) discrete choice models that allow for flexible product substitution patterns. The paper shows how the GEV choice-based sampling estimator can be applied to estimate parameters associated with censored alternatives, and derive identification rules that can be used to determine when these parameters are unique.

Empirical examples based on simulated datasets demonstrate the large-sample consistency of estimators and provide insights into data requirements needed to estimate these models for finite samples.