Transportation Center Seminar........

"Semiparametric Estimates of the Willingness to Pay for Autonomous Electric Vehicles"

Ricardo A Daziano

**David Croll Fellow Assistant Professor
School of Civil and Environmental
Engineering**
Cornell University

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3:00 - 4:00 pm

Location:
Transportation Center
Northwestern University
Chambers Hall
600 Foster, Evanston
Lower level

Abstract

Autonomous vehicles use sensing and communication technologies to navigate safely and efficiently with little or no input from the driver. These driverless technologies will create an unprecedented revolution in how people move, and policymakers will need appropriate tools to plan and analyze the large impacts of novel navigation systems. In this paper we derive semiparametric estimates of the willingness to pay for automation. We use data from a nation-wide online panel of 1,260 individuals who answered a vehicle-purchase discrete choice experiment focused on energy efficiency and autonomous features.
Several models were estimated with the choice microdata, including a conditional logit with deterministic consumer heterogeneity, a parametric random parameter logit, and a semi-parametric random parameter logit (with assumption-free heterogeneity distributions that are a mixture of normals). Regarding operating costs, specifications with both endogenous and exogenous discounting were considered.

Bio: Ricardo A. Daziano is the David Croll Fellow Assistant Professor in Civil and Environmental Engineering at Cornell University. He received a PhD in economics from Laval University in 2010. Daziano's research focuses on engineering decision making, specifically on theoretical and applied econometrics of consumer behavior and discrete choice models applied to technological innovation in transportation and energy. Daziano's specific empirical research interests include the analysis of air travel demand, the study of pro-environmental preferences toward low-emission vehicles, modeling the adoption of sustainable travel behavior, estimating willingness-to-pay for renewable energy, and forecasting consumers' response to environmentally-friendly energy sources.