Securing A Better Future Through Urban Forecasting

Kara Kockelman
Professor, E.P. Schoch Professorship, Civil, Architectural and Environmental Engineering

CURRENT RESEARCH

Anticipating and moderating congestion, emissions, crashes, energy demands and most everything else

Every day more and more people are entering our roadways. As transportation needs increase, city planners need to understand and ready themselves for the impact of growing cities and their roadways. They need the proper tools to help understand the impacts of growth and make plans that will ensure public health and safety. Dr. Kara Kockelman, professor of Engineering at The University of Texas at Austin, and her team are working to ensure the future health and welfare of communities locally, nationally, and internationally. Dr. Kockelman uses complex econometrics or data analytics for forecasting the future of urban systems. She and her team are developing strategies for more affordable, less congested, and less polluting transportation solutions.

Dr. Kockelman and her team's research involves the use of econometrics to to anticipate travel choices, emissions, human health and other impacts of multiple environmental policies. Dr. Kockelman's research begins by developing an urban forecast of the environment we live in. Urban forecasting helps anticipate the energy demands and emissions of citizens, buildings, transportation and many other variables. It requires understanding demographic land use changes, traveler choices, energy demands, emissions sources, network equilibration, and evolving vehicle technologies. With this data, her team monetizes the costs and benefits of different actions. Enabling Dr. Kockelman to deliver benefit-cost ratios and other performance metrics for different choices.

- Dr. Kockelman and her team provide decision-makers research data to steer them in the direction for optimal policy-making, alerting them to challenges and opportunities for making the...

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AFFILIATION

The University of Texas at Austin

EDUCATION

- M.S., in Civil Engineering, 1996 , University of California, Berkeley
- Masters, in City and Regional Planning, 1996 , University of California, Berkeley
- Ph.D., in Civil Engineering, 1998 , University of California, Berkeley

AWARDS

- Recipient of the American Society of Civil Engineering's Harland Bartholomew Award
- Walter L. Huber Research Prize in Transportation Engineering
- James Laurie Prize in Transportation Engineering
- Women's Transportation Seminar (WTS) 2007 Heart of Texas Chapter Woman of the Year Award
- Voted one the world's Top 100 Young Innovators for MIT
- and 3 more...

RESEARCH AREAS

Environment, Clean Energy, Ecology, Global Policy

FUNDING REQUEST

Your funding will help enable Dr. Kockelman and her team to conduct the majority of their electrified and shared automated vehicle fleet research. Dr. Kockelman and her team have the expertise to complete this research in the next two years, if fully funded.