Improving Transportation

Steve Boyles

Assistant Professor, Civil, Architectural, and Environmental EngineeringAssistant Professor, Civil and Architectural Engineering

CURRENT RESEARCH

Modeling solutions through various system networks to improve transportation

As population and cities around the world continue to grow, congestion and overcrowding are some of the most pressing issues facing the economy, environment, and quality of life in urban areas. Each year in the United States alone, nearly four billion hours and three billion gallons of fuel are wasted by individuals sitting in traffic jams. Further, an additional 56 billion pounds of carbon emissions are associated with stagnant vehicles locked in congestion. The financial and economic costs of congestion exceed $120 billion annually, including fuel, wasted time, and the economic impact of delays on freight and shipping, not to mention the costs of environmental damage. It is apparent that efficient solutions for logistics organization and transport are direly needed. Dr. Stephen Boyles is exploring new technologies and ideas, but more importantly the expected impact of their application, to resolve transportation-related issues. Human behavior, namely the changes in behavior in responding to new traffic solutions, often reduces the expected impact of these changes. Dr. Boyles is considering this effect by modeling potential solutions before they are implemented. Problems resulting from transportation are only going to be exacerbated as people crowd into cities unless solutions are researched and implemented now. Stephen Boyles is at the forefront of transportation engineering research, developing novel solutions for making transportation and life more efficient and less stressful.

Dr. Stephen Boyles, Assistant Professor of Civil, Architectural and Environmental Engineering at The University of Texas at Austin is studying transportation systems--how people travel (driving, public transit, cycling, walking)...

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AFFILIATION

The University of Texas at Austin

EDUCATION

- Ph.D. in Civil Engineering 2009, The University of Texas at Austin
- M.S. in Civil Engineering 2006 ,The University of Texas at Austin
- B.S. in Civil Engineering 2004, University of Washington
- B.S. in Mathematics 2004,University of Washington

AWARDS

- Fred Burggraf Award, Transportation Research Board, 2015
- Finalist, Transportation Network Modeling Best Paper Award, Transportation Research Board, 2014
- NSF Faculty Early Career Development Award (CAREER), 2013
- Dwight D. Eisenhower Graduate Fellow, 2006-2009
- Sue McNeil Outstanding Presentation Award (AISIM4 Symposium), 2008

RESEARCH AREAS

Technology, Computational Sciences / Mathematics, Clean Energy

FUNDING REQUEST

Your contributions will ensure that Dr. Boyles continues to recruit the most talented transportation engineering students from around the world for work on his research projects. These students play a crucial role in research development, but even more importantly they will be the future leaders in the transportation field: in the public and private sectors and in academia. Any investment in their education will be repaid numerous times through their careers in education and industry.