

**ENERGY EFFICIENT URBAN MOBILITY SYSTEMS**

**Thursday, April 25**  
**12:00 - 1:15 PM (US Arizona)**

**College Avenue Commons**  
**(CAVC) Room 559 (Parking)**



**Stanley E. Young, PE, PhD**

*Advanced Transportation and Urban Scientist*

**National Renewable Energy Laboratory**

Golden, CO

#### About the Talk

This talk will provide an overview of the National Renewable Energy Laboratory's research portfolio in Urban Science, with particular emphasis on four projects. (1) The Mobility Energy Productivity (MEP) metric was created at NREL to serve as a central lens for the Department of Energy's Energy Efficient Mobility System initiative to assess progress. Moving forward as an ASCE ESX standard in 2019, the MEP metric provides a quantitative tool for smart cities to assess competing mobility technologies. (2) The Automated Mobility District (AMD) toolkit, based on open source microsimulation software, addresses district scale implementations of automation for public mobility. (3) Employers are increasingly taking responsibility for the employee's commute due to market pressure. Employer Provided Mobility (EPM) can be as simple as a free transit pass to as extensive as a chauffeured ride to work. NREL is investigating the long term potential sustainability benefits that could emerge as employers enter this space. (4) Infrastructure Sensing is a term used to describe the deployment of spatial sensors such as LiDAR for increased safety and efficiency at intersections. Whereas connected vehicles (CV) technology provides detailed information on a portion of the vehicles in the network, infrastructure sensing provides complete observability of all vehicles, pedestrians and other moving objects, but only within the vicinity of the intersection. This project quantifies the safety, congestion, and energy benefits of deploying infrastructure sensing at critical intersections.

#### About the Speaker

Dr. Young serves as the Advanced Transportation and Urban Scientist at the National Renewable Energy Laboratory, Transportation & Hydrogen System Center in Golden, Colorado, leading research efforts into the impacts of new mobility systems, particularly in urban areas. He was appointed as the DOE technologist-in-city for the Columbus Smart City program in 2016. Dr. Young leads the Urban Science pillar as part of the US Department of Energy SMART Mobility research initiative. Previous appointments include the Kansas Department of Transportation from 1994-2006, the Johns Hopkins Applied Physics Lab 1994-1996, and volunteer with the United States Peace Corps in Cameroon, West Africa.

This seminar is webcast live to a worldwide audience by  
 ASU Engineering – Global Outreach and Extended Education (GOEE).

To access the live webcast and archive of previous seminar recordings, please visit:

<http://links.asu.edu/ASU-Transportation-Seminar>

Light refreshments will be served. Event is open to the public.



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