UTC Project Information	
Project Title	**Secondary Particulate Matter Exceed Primary Emissions from Current Gasoline Vehicles: Air Quality and Public Health Implications**
University	University of California, Riverside
Principal Investigator	Georgios Karavalakis
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Funding Source(s) and Amounts Provided (by each agency or organization)	Center for Advancing Research in Transportation Emissions, Energy, and Health (CARTEEH) - $75,000
Total Project Cost	$75,000
Agency ID or Contract Number	Grant #69A3551747128 (UCR-01-14)
Start and End Dates	02/01/2018 – 01/31/2019
Brief Description of Research Project	The goal of this study is to characterize the primary emissions and the SOA formation from current technology GDI and MPI vehicles when operated under different driving cycles. For this study, UCR will employ a 30 m3 Mobile Atmospheric Chamber (MACh) (2 mil fluorinated ethylene propylene Teflon film reactor) that was developed to study the aged emissions from different combustion systems. In addition to the mobile chamber, we will also utilize an oxidation flow reactor that was developed in Tampere University of Technology, Finland, which is better suited to measure real-time secondary aerosol formation potential of rapidly changing emission sources due to its improved flow conditions and shorter residence time.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	It is expected that the proposed measurements will provide valuable information on the real-time formation of secondary aerosol from current GDI and MPI vehicles under different driving conditions and on different fuel formulations at a level that has not previously been achieved, which will help regulatory and environmental agencies and medical professionals develop prognostic models that are critical for planning and regulatory decision-making, as well as for population exposure monitoring.

Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links • Reports • Project website	