

**Project Information Form**

Project Title:	Emission Impacts of Connected and Automated Vehicle Deployment in California
University:	University of California, Davis
Principal Investigator:	Giovanni Circella Co-PI: Miguel Jaller
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Funding Source(s) and Amounts Provided (by each agency or organization):	California Air Resources Board (CARB) - \$220,000.00
Total Project Cost:	\$220,000.00
Agency ID or Contract Number:	CARB 17RD003 UCD-ARB-511
Start and End Dates:	May 1, 2018 – April 30, 2020
Brief Description of Research Project:	<p>The project builds on the growing literature that investigates the potential impacts of connected and automated vehicles (CAV) on transportation systems. The researchers assess the range of impacts from various penetration levels of light-duty CAVs on vehicle miles traveled (VMT), energy usage, and greenhouse gas (GHG) and criteria pollutant emissions in California through the application of the California Statewide Travel Demand Model coupled with an in-depth analysis of the potential transformations introduced by CAVs in various aspects of transportation supply and demand policy, and economic characteristics acquired from previous studies and a workshop with experts. The impacts of CAV deployment will likely depend on the combination of policies that are introduced, the types of technologies that are deployed, the electrification (and primary source of energy) of vehicles, the model of vehicle ownership and use including the adoption of eventual shared-use/shared-ownership, the pricing schemes that are adopted, and many other variables. The research team will define a range of scenarios related to CAV deployment, then consider different policy profiles, model the scenarios and evaluate the likelihood of the results. Using the results from the simulation of the scenarios, the research team will work together with California Air Resources board staff at the identification of potential policy profiles and space for interventions that can mitigate the likely impacts of CAV deployment and ensure that the California's environmental targets, air quality goals and impacts on future climate are met without unintended consequences.</p>



# National Center for Sustainable Transportation

Describe Implementation of Research Outcomes (or why not implemented):  Place any photos here	
Impacts/Benefits of Implementation (actual, not anticipated):	
Web Links <ul style="list-style-type: none"><li>• Reports</li><li>• Project website</li></ul>	<a href="https://ncst.ucdavis.edu/project/emission-impacts-of-connected-and-automated-vehicle-deployment-in-california/">https://ncst.ucdavis.edu/project/emission-impacts-of-connected-and-automated-vehicle-deployment-in-california/</a>