

Project Information Form

Project Title:	Automated Vehicles and Central Business District Parking: The Effects of Drop-Off Travel on Traffic Flow and Vehicle Emissions
University:	University of California, Davis
Principal Investigator:	Caroline Rodier Co-PIs: Michael Zhang and Miguel Jaller
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Funding Source(s) and Amounts Provided (by each agency or organization):	California Department of Transportation (Caltrans) - \$58,355.00
Total Project Cost:	\$58,355.00
Agency ID or Contract Number:	Caltrans 65A0686 Task Order 014 UCD-CT-FAST-014
Start and End Dates:	December 1, 2018 – November 30, 2019
Brief Description of Project:	The potential for automated vehicles to reduce parking in central cities has generated a lot of excitement among urban planners. Automated vehicles could drop-off passengers in areas where parking costs are high: personal automated vehicles could return home or park in less expensive locations and shared automated vehicles could serve other passengers. Reduced on-street parking and parking structures present numerous opportunities for redevelopment that could improve the livability of cities, for example, more street and sidewalk space for pedestrian and bicycle travel. However, almost no research has been conducted to examine the effect of high volumes of drop-off travel during peak periods on traffic flow, which could exacerbate congestion, vehicle miles traveled, and emissions, and undermine efforts to improve the environment for non-motorized travel. This project will use a microscopic road traffic model to simulate vehicle travel in San Francisco's downtown central business district during the a.m. peak to explore traffic flow effects of automated vehicle scenarios in which the researchers vary (1) the demand for drop-off and pick-up travel versus parking, (2) the supply of on-street and off-street parking, and (3) the price of curbside drop-off/pick-up space.
Describe Implementation of Research Outcomes (or why not implemented): Place any photos here	



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Impacts/Benefits of Implementation (actual, not anticipated):	
Web Links <ul style="list-style-type: none">• Reports• Project website	https://ncst.ucdavis.edu/project/automated-vehicles-and-central-business-district-parking/