

Florida Poly to boost autonomous vehicle research with new simulation facility funded by NSF

Florida Polytechnic University will have a new simulation facility for real-time testing of autonomous vehicle technology, thanks to a new National Science Foundation grant.

LAKELAND, Fla. ([PRWEB](#)) October 14, 2019 -- Florida Polytechnic University will soon have a new simulation facility on campus dedicated to the testing and verification of autonomous vehicle technology in real-time.

The National Science Foundation awarded the University a \$350,000 grant that enables the development of a large-scale Hardware-in-the-Loop (HiL) simulation facility for connected and autonomous vehicles (CAVs). HiL simulation is a robust gateway for the development and testing of complex real-time embedded systems. The new lab should be operating by the beginning of the spring semester.

“I thank the National Science Foundation for their support of Florida Polytechnic University’s research and development of autonomous vehicle technology,” said Florida Sen. Marco Rubio. “Autonomous vehicle research is critical to the future of transportation in the state of Florida, and I look forward to Florida Poly’s continued leadership in this space.”

The HiL simulation facility will provide researchers from the Florida Poly’s [Advanced Mobility Institute](#) a more realistic approach to the testing and verification procedures, as they collaborate closely with students on practical and real-world projects related to CAVs. These include research on how autonomous vehicles operate independent of weather or electromagnetic interferences, while surrounded by non-verbal human communication such as gestures and signals.

“So far we’ve been working and generating different scenarios as models for Software-in-the-Loop testing, but only doing it with software is not as realistic,” said [Dr. Arman Sargolzaei](#), assistant professor of [electrical engineering](#) and the grant’s lead investigator. “The new Hardware-in-the-Loop facility will allow us to do testing that is closer to real-world scenarios.”

According to Sargolzaei, Hardware-in-the-Loop implementation is a great step forward to achieving cost-efficient and safe test procedures before migrating to road or test track experimentations.

“Advancing Hardware-in-the-Loop application domain to the era of CAVs will lead to a set of exemplary breakthroughs in the field of transportation research,” Sargolzaei said. “We are excited for the establishment of this new facility to accelerate our research mission, which is to make automated vehicle more safe and secure.”

In addition to Sargolzaei, other researchers collaborating on the grant’s research are Dr. Suleiman Alsheikh, Dr. Ala Alnaser, Dr. Jorge Vargas, Dr. Saleem Sahawneh, and Dr. Rahul Razdan from the Advanced Mobility Institute, and Dr. Mustafa Ilhan Akbas from Embry-Riddle Aeronautical University

Florida Poly has positioned itself as a leader in autonomous vehicle technology research. The Advanced Mobility Institute is the largest research effort in the country dedicated exclusively to the testing and verification of this emerging technology. It has developed partnerships with state, national, and international entities such as SunTrax, the Jacksonville Transportation Authority, and TalTech University in Estonia, among



others.

About Florida Polytechnic University: Florida Polytechnic University is accredited by the Southern Association of Colleges and Schools Commission on Colleges and is a member of the State University System of Florida. It is the only state university dedicated exclusively to STEM and offers ABET accredited degrees. Florida Poly is a powerful economic engine within the state of Florida, blending applied research with industry partnerships to give students an academically rigorous education with real-world relevance. Connect with Florida Poly online at www.floridapoly.edu.



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