

Faculty Researchers

Dr. Rawa Adla

Expertise includes control theory, modeling and validation of complex systems, sensors, and data fusion/target-tracking.

Dr. Ala Alnaser

Expertise includes applied algebra and modeling, machine learning, and autonomous vehicle technology.

Dr. Suleiman Alsheiss

Expertise includes active and passive remote sensing, satellite communication, and radar testing.

Dr. Harish Chintakunta

Expertise includes topological data analytics, signal processing, and graph theory.

Dr. Navid Khoshavi

Expertise includes security of intelligent transportation systems and Blockchain technology.

Dr. Rahul Razdan

Expertise includes autonomous vehicle technology, semiconductor design, and STEM education.

Dr. Edwar Romero-Ramirez

Expertise includes smart sensors, vibration analysis, and energy harvesting technologies.

Dr. Arman Sargolzaei

Expertise includes control theory, the security of connected autonomous vehicles.

Dr. Onur Toker

Expertise includes hardware acceleration, FPGA applications, and embedded systems.

Dr. Sravani Vadlamani

Expertise includes transportation operations and safety, ITS, and traffic simulation.

Dr. Jorge Vargas

Expertise includes microelectronics, MEMs, and RF/microwave engineering.

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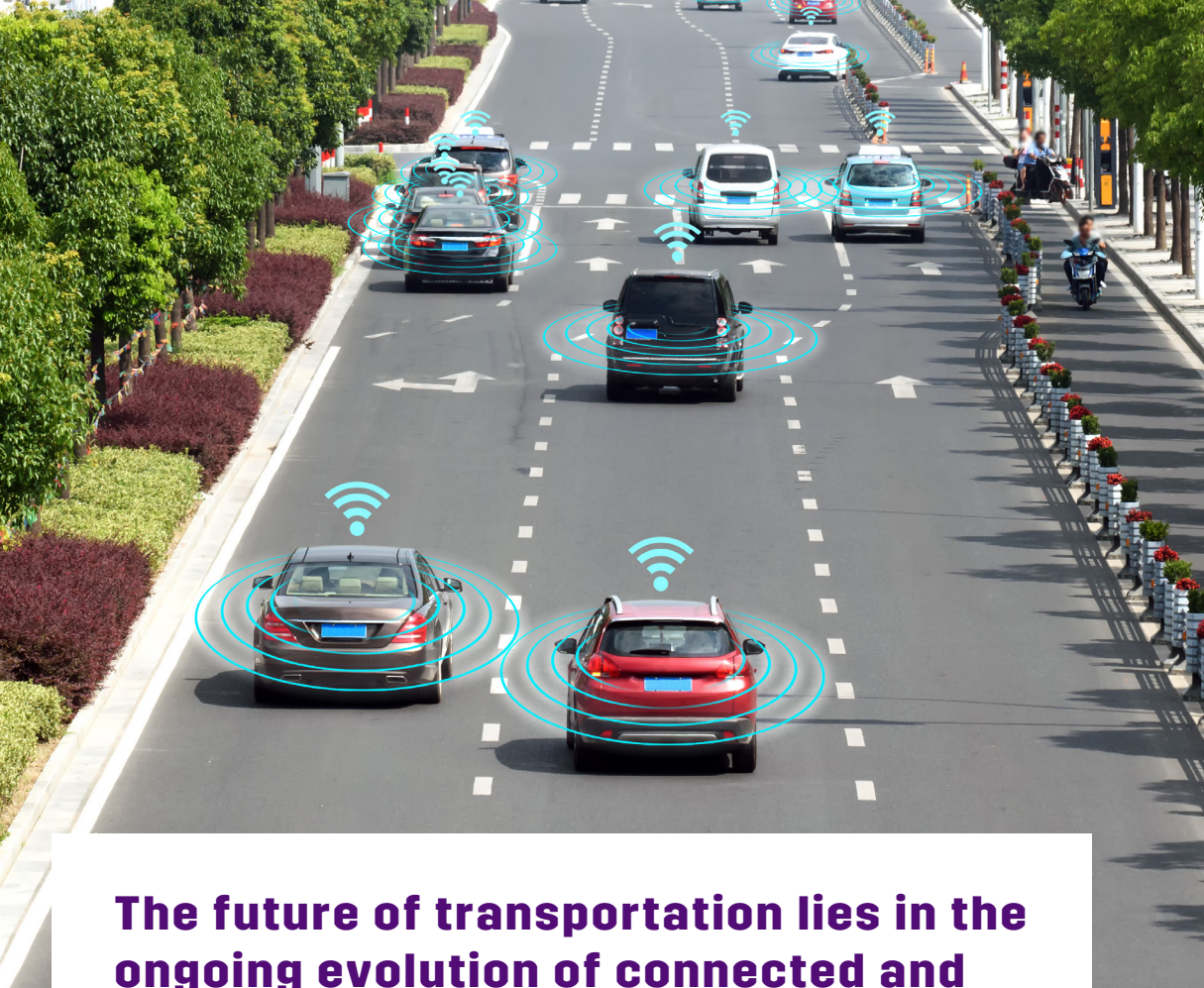


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The future of transportation lies in the ongoing evolution of connected and autonomous vehicles (CAV).

Florida Polytechnic University is leading the way in ensuring this emerging technology can be used to its fullest potential by undertaking the significant role of its testing and verification.

By prioritizing the development, testing, and verification of CAV technology, Florida Poly's Advanced Mobility Institute (AMI) demonstrates the robustness, safety, and security of these systems and catapults the ability of autonomous vehicle (AV) innovators to continue expanding the technology's use in industry and consumer products.

AMI's leadership in research, education, outreach, industrial partnerships, and economic development sets the stage for Florida Poly's growing recognition as a critical institution in moving CAV technology toward the future.



MISSION AND VISION

AMI aims to be the premier university-affiliated applied research center for the development and testing of autonomous vehicle technology. The goal is to:

- Bring together subject matter experts from academia, industry, and government to conduct basic and applied research to advance autonomous systems and technologies
- Build an unequalled framework for research, professional education, and technology transfer and commercialization
- Provide the workforce with well-trained engineers and scientists who have hands-on experience and a solid theoretical understanding of autonomous systems

RESEARCH TOPICS

- Testing and verification of CAVs
- Testing CAVs in contested environments under cyberattack
- Testing and verification of CAVs based on real-world crashes
- The effect of EMI on AV mmWave RADAR performance
- The impact of various weather conditions on AV sensors ecosystem
- The resilience of AV RADAR to cyberattacks
- Topology and infrastructure
- Software/hardware/vehicle in-the-loop testing of CAVs
- Testing resiliency and robustness of communication and network connectivity
- Autonomous vehicle design

EDUCATIONAL OUTREACH

AMI provides a rich and intensive educational experience for students across multiple disciplines, including electrical engineering, computer engineering, business analytics, and computer science. With opportunities for student research and collaboration, the institute fosters an educational experience that provides a strong foundation for success in both industry and academia. Partnerships such as an agreement with Tallinn University of Technology (TalTech) in Estonia to collaborate on the development of AV technology for the public sector further advance these opportunities.

PARTNERS



• Suntrax. The transportation technology testing facility's partnership with AMI advances the verification and testing of emerging CAV technology and strengthens Florida's status as a transportation technology leader.



• Embry-Riddle Aeronautical University. The universities are collaborating to further the advancement of airborne autonomous technologies.

CENTRAL FLORIDA
AUTOMATED VEHICLE PARTNERS



• Central Florida Automated Vehicle Partners. AMI is working to further the exploration and implementation of CAV technology with multiple stakeholders along the I-4 Corridor.



• Jacksonville Transportation Authority. This partnership works to enhance the development of AV technology in public transportation.

• Tallinn University of Technology (TalTech) in Estonia. Collaboration between the universities fosters the development and testing of AV technology for use in controlled settings such as downtowns and university campuses.

