

North Carolina A&T State University

Transportation Technology Capabilities

About NCA&T

North Carolina Agricultural and Technical State University (NCA&T) was established in 1891 as an 1890 land-grant college. NCA&T is the nation's largest HBCU and is a doctoral, high research activity university with a rich history educating the workforce of the future.

NCA&T Transportation Technology Capabilities

- Modeling, Development, and Control of Autonomous Vehicles
- Safety and Reliability of Autonomous Vehicles
- Perception and Situational Awareness of Autonomous Vehicles
- Human-Autonomy Interactions
- Connected and Cooperative Autonomous Vehicles

Past Performance

- "Center for Regional and Rural Connected Communities (CR²C²)," USDOT, \$30M, 2023-2028.
- "NC Transportation Center of Excellence on Connected and Autonomous Vehicle Technology (NC-CAV)," NCDOT, \$2M, 2020-2025.
- "Technology Transfer: Microtransit Pilot Project in Greensboro, NC, NCDOT, April 15, 2023 - July 14, 2024, \$172,000.
- "Assessment of the current infrastructure and the required adjustments for safe operation of vehicles' autonomy functionalities in rural areas," NCDOT, \$240,000, 2023-2025.
- "Improving the performance and runtime efficiency of the object detection and classification," Ford Motors, \$200,000, 2022-2023
- "Developing and Operationalizing a Testbed of Connected Self-driving Shuttles to Test and Develop CAV Applications in North Carolina," NCDOT, \$290,000, 2021-2023.
- "Enhancing Autonomous Vehicle Traffic Safety through Pedestrian Detection, Classification and Communication," \$199,396, NCDOT, 2018-2020.
- "Context-aware Decision-making and Automatic Tasking for Autonomous Vehicles," Army Research Laboratory (ARL), \$260,000, 2020-2022.
- "MRI: Acquisition of a Testbed of Connected Autonomous MicroTransit Vehicles," NSF, \$550,000, 2020-2023.
- "Excellence in Research: Real-time Fault Diagnosis for Self-Driving Vehicles," NSF, \$810,000, 2020-2023.

Transportation Technology Research Infrastructure



CR2C2 Regional UTC



NC-CAV Center of Excellence on CAVs



Aggie Auto Shuttles



ACCESS Laboratory
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A fleet of autonomous and micro-transit vehicles



AV Rural Test Track



Vehicle-In-The-Loop Driving Simulator



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