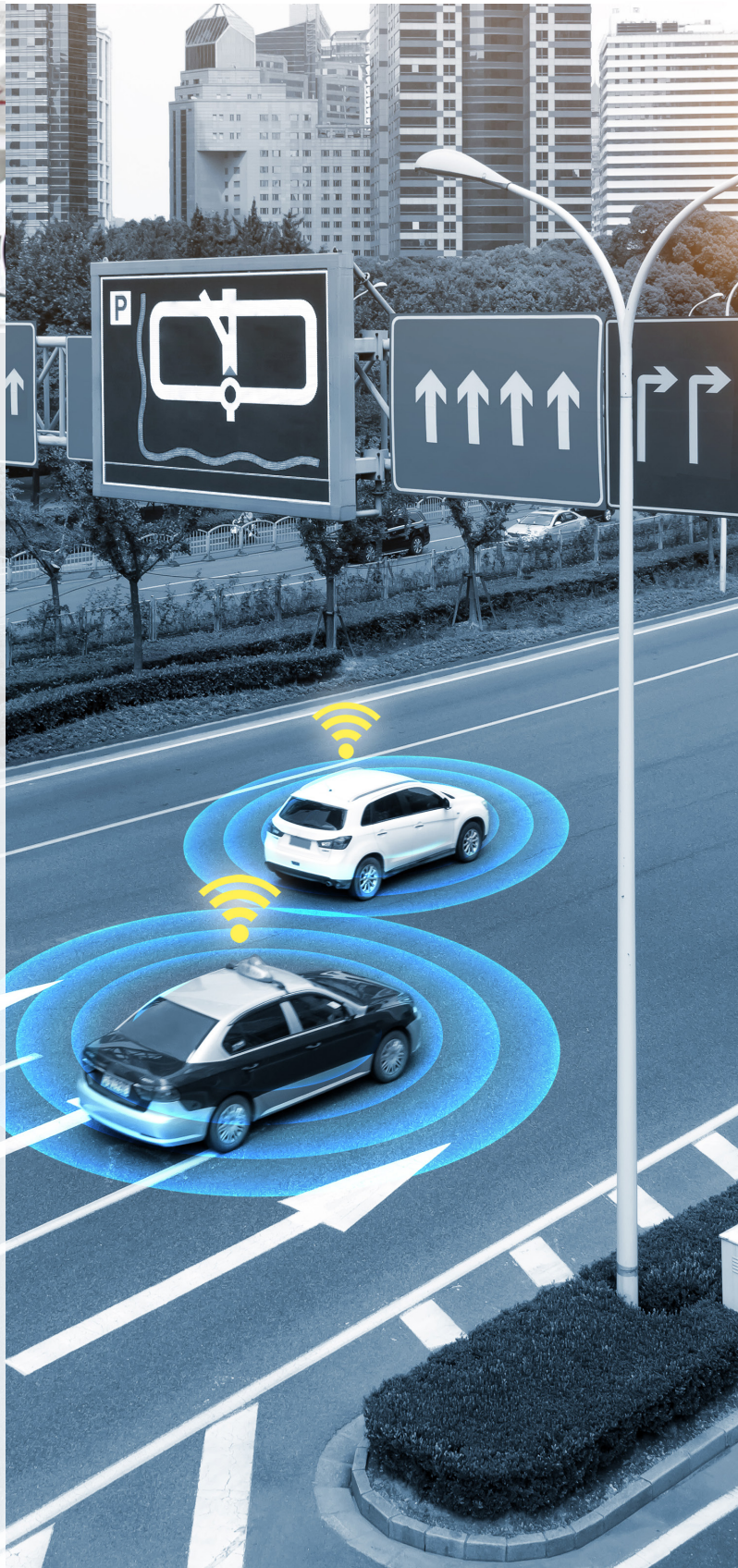
ECOCAR MOBILITY CHALLENGE

ABOUT ECOCAR

The EcoCAR Mobility Challenge is the latest U.S. Department of Energy (DOE) Advanced Vehicle Technology Competition (AVTC) series. The four-year competition will challenge 11 North American universities to re-engineer a 2019 Chevrolet Blazer to incorporate advanced propulsion systems, electrification and connected and automated vehicle technology that will improve the energy efficiency, safety and consumer appeal of vehicles.

Headline sponsored by DOE, General Motors (GM) and MathWorks, and managed by Argonne National Laboratory, EcoCAR is the heart of automotive ingenuity working towards future mobility solutions.

Mobility is rapidly changing as customers look for safe, convenient and cost-effective options to get from point A to point B. Consumers are looking toward innovative mobility solutions, featuring new connected and automated vehicle technologies that hold the promise of transforming mobility. The students are in the driver's seat - EcoCAR provides a real-world training ground for students to gain hands-on experience while following a multi-year vehicle development process to design, integrate and refine vehicles into reliable, energy-efficient mobility systems.



U.S. DEPARTMENT OF ENERGY

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WHY IT'S IMPORTANT

More than 1,000 students from across North America will participate each year, gaining real-world experience solving complex engineering challenges as well as building teamwork and leadership skills they will take with them into their future careers. EcoCAR highlights the best and brightest students in STEM and manufacturing careers and, through youth outreach programs, promotes diverse and inclusive STEM education efforts.

AVTCs, such as the EcoCAR Mobility Challenge, influence and shape engineering curriculum at the university level to cultivate future transportation leaders and enhance the North American engineering workforce. Teams will use onboard sensors and wireless communication from the surrounding ecosystem to improve overall operation efficiency in the connected urban environment of the future. Teams will also integrate SAE Level 2 Automation into the Blazers, which enables automated functions like acceleration and steering, while still requiring the driver to remain engaged with the driving task at all times.

In addition, EcoCAR teams will use Model-Based Design, a mathematical and visual design approach using MATLAB and Simulink already widely adopted by the automotive industry. This assists teams so they can quickly and cost-effectively manage projects, collaborate on designs and develop complex embedded systems.

AVTC HISTORY

Over the past 30 years, the U.S. Department of Energy has sponsored 12 AVTCs in partnership with the North American auto industry. Managed by Argonne National Laboratory, AVTCs exemplify the power of public-private partnerships in providing invaluable hands-on skills to promising minds ready to enter the workforce. DOE sponsors these competitions to educate the next generation of automotive engineers and accelerate the development and demonstration of technologies of interest to the DOE and the automotive industry.

30th ANNIVERSARY AVTC
ADVANCED VEHICLE TECHNOLOGY COMPETITIONS

MANAGED BY Argonne NATIONAL LABORATORY

PARTICIPATING SCHOOLS

Embry-Riddle Aeronautical University

Georgia Institute of Technology

McMaster University

Mississippi State University

Ohio State University

University of Alabama

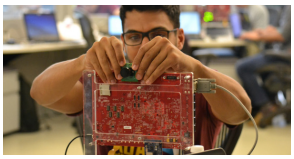
University of Tennessee, Knoxville

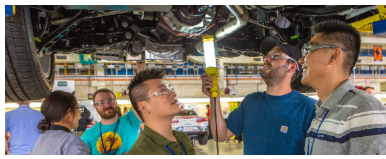
University of Washington

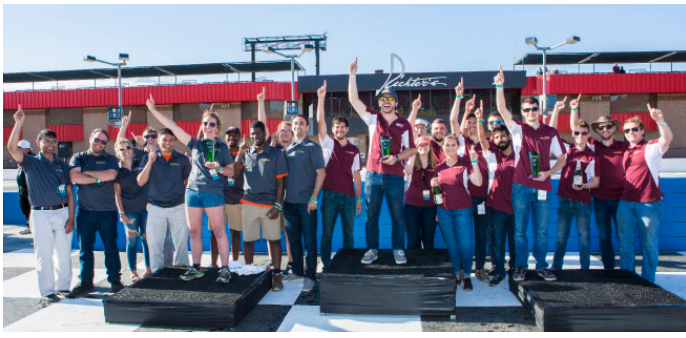
University of Waterloo

Virginia Tech

West Virginia University







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SPONSORS

VISIONARY: NXP, NSF

LEADERSHIP: intel, GM, BOSCH Invented for life, PACCAR, dSPACE

SUSTAINING: SIEMENS, DENSO, AVL, HORIBA, TRC

CONTRIBUTOR: Milwaukee, BorgWarner, California Air Resources Board, PROTERRA, tesa, VECTOR, OXTS, Gage, EPRI, J.D. POWER, CR Consumer Reports

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