

Announcing the 2023 CyberAuto Challenge

Call for Students

The CyberAuto Challenge is the world's oldest hands-on, instructor-led and industry-led automotive cybersecurity practicum training camp. Major automakers bring modern cars and their engineers, government and academia bring researchers, and hackers....bring themselves – all to spend a week assisting students in learning about and then practicing cybersecurity on a modern automobile.

Goals of the CyberAuto Challenge:

- to help develop talent for industry, and present interesting problems to develop curiosity in students
- to help forge/foster a professional community of interest around automotive cybersecurity
- to help connect the brightest and most motivated students with the best teachers and the best potential employers
- to help showcase emergent technologies relevant to automotive cybersecurity

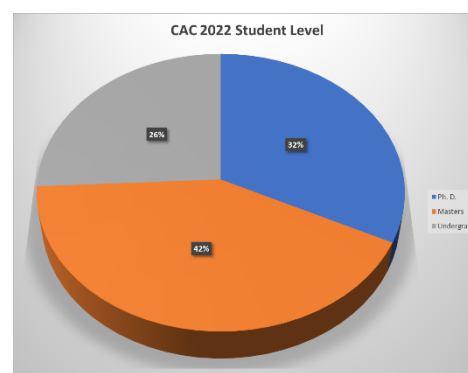


Examples of past keynotes and teachers (partial list):

- Mudge
- Bruce Schneier
- Len LaPadula (Bell/LaPadula Model)
- Craig Smith (Author of the Car Hackers' Handbook)
- Robert Leale (Founder of Car Hacking Village)
- Justin Montalbano (Runs the Car Hacking Village)
- Karl Koscher (authored of 2010 and 2011 USENIX papers on automotive cybersecurity)
- Bill Hass (authored first operational paper on hacking trucks and presented at BlackHat)
- Colin O'Flynn (Creator of "Chip Whisperer")
- Karl LeBoeuf (Technical Fellow for Cybersecurity at General Motors)
- David Colombo (Car hacker)
- Ollie Hartkopp (Creator of SocetCAN)
- And many others

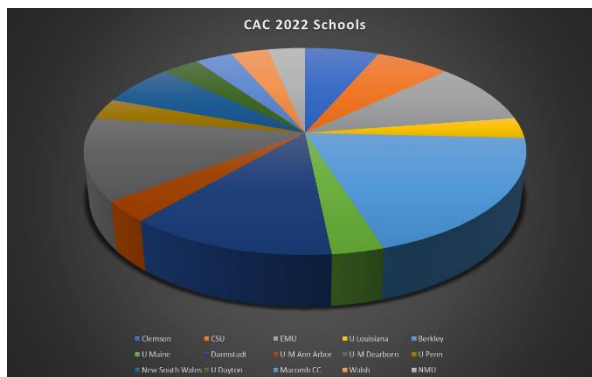
Who comes to the CyberAuto Challenge?

The CyberAuto Challenge is open to college students enrolled in a degree granting program. The specific composition of attending universities and concentrations of different grade levels change on a year-by-year basis. These graphs show student information from the 2022 event. CyberAuto Challenge has global outreach and has hosted students from universities in 13 countries and typically has



some university “rotation” from one year to the next. Enrollment is small – with an ideal team size of 8-9 students per car to maximize the hands-on aspect of the event.

Professionals also attend the CyberAuto Challenge. Automakers send engineers with the vehicles they allow as learning platforms. These engineers are on the cybersecurity teams (design, red, and/or blue) for these companies and have specific experience/knowledge on the provided vehicles. Government sends engineers and often assists in training – for example the Department of Energy’s INL has sent engineers to help train and study electrical vehicles and charging stations since 2018 and often provide information from current research activities from INL. Security companies and hacker groups send engineers with embedded cybersecurity backgrounds.



What do we learn?

The specific courses will change from year to year, but we will cover current relevant topics in embedded systems cybersecurity. We work with many partner organizations to help provide meaning to the classes; for example the Michigan State Police will embed information in a vehicle’s ECUs and then during the forensics class the students will learn how to extract information to help solve a case. Another example is INL (Dept of Energy) has brought EVs and EVSEs and sometimes prototype units to help educate on vehicle to GRID interactions and risks. Other classes have been concerned with side-channel analysis. Protocols and wireless issues have been a constant course at the Challenge as has instruction on reverse engineering. The days are long – typically longer than 10 hours – and filled with learning and opportunity.



What does it cost?

Our sponsors are committed to spreading knowledge of and passion for the technology behind the modern connected vehicle and to help students become informed about this exciting career field and potential employment opportunities. There is no cost to the student. That’s right – world class training from industry leading experts and a week with a modern car for the low, low price of absolutely no money whatsoever. We also provide 3 meals a day (catered) and lodging (at a nearby hotel).



When/Where?

The 2023 CyberAuto Challenge will run from July 23-28 (classes begin early on the 24th and there is a short social on the evening of the 23rd) in Warren, Michigan (Greater Detroit).

How can I attend?

You can send an email to cyberautochallenge@gmail.com with the included form completed or you can ask one of your professors to recommend you. Your application **must name a professor**. We rely on the



professors for candidacy qualifications. We will be reaching out to this professor to validate your qualifications to attend. We anticipate final student selection by May 8th. Selection is competitive.