



INDY AUTONOMOUS CHALLENGE THE AUTONOMOUS CHALLENGE @ CES

FACT SHEET

What is the Indy Autonomous Challenge (IAC)? The [Indy Autonomous Challenge](#) is a prize competition designed to engage university teams from around the world to program autonomous-modified racecars and compete in a series of history-making competitions including the Autonomous Challenge @CES on January 7, 2022 at the Las Vegas Motor Speedway.

Goals: A primary goal of the IAC is to advance technology that can speed the commercialization of fully autonomous vehicles and deployments of advanced driver-assistance systems (ADAS). These enhancements will lead to increased safety and performance in all modes of motorsports and commercial transportation. In addition, the competition is a platform for students to excel in Science, Technology, Engineering and Math (STEM).

STEM: The IAC taps into the power of incentivized prize competitions to inspire the best and brightest in universities worldwide to eliminate barriers to innovation, overcome complex challenges, and increase public awareness of the transformational impact that automation can have to improve vehicle safety and performance.

Inspiration: The inspiration for the IAC was the 2004-2005 DARPA Grand Challenge, which led to the advancement of new technologies and invigorated the prize challenge model of promoting innovation. Sebastian Thrun, who won that challenge and developed the first online university course on artificial intelligence (AI), serves on the IAC Advisory Board and was instrumental in guiding the IAC on the components of the challenge.

Organizer and Partners: The primary organizer of the IAC is [Energy Systems Network](#) (ESN), supported by a consortium of public and private partners and sponsors including the Indiana Economic Development Corporation (IEDC), Clemson University's International Center for Automotive Research (CU-ICAR), Juncos Hollinger Racing, and Dallara USA, manufacturer of the IAC Dallara AV-21, which serves as the base IAC racecar that each team uses.

EVENTS FOR CES 2022 – WEST HALL BOOTH #5029

The IAC, in association with the [Indiana Economic Development Corporation \(IEDC\)](#), will have a major presence at CES 2022. Featured in West Hall Booth #5029, will be the IAC's most advanced autonomous racecar, the Dallara AV-21.

The IAC will hold the Autonomous Challenge @ CES at the Las Vegas Motor Speedway (LVMS) on Friday, January 7, 2022. **Only credentialed CES attendees and media will be permitted to attend.**

Event Details:

IAC University Team Practice Sessions, Las Vegas Motor Speedway

- **January 3-6**
 - 8 a.m. – 5 p.m. PST
- IAC university teams will be conducting practice sessions at the Las Vegas Motor Speedway.

Autonomous Challenge @ CES, Las Vegas Motor Speedway (LVMS), January 7, 2022 (Only CES 2022 credentialed attendees and media will be permitted to attend)

- **12 p.m. – 4 p.m. PST**
- Pre-show broadcast coverage, opening ceremony, competition (head-to-head, high-speed passing competition), post-competition winner's ceremony

IAC UNIVERSITY TEAMS

The IAC website [IndyAutonomousChallenge.com](#) has a dedicated [Teams page](#) with detailed information about each university team.

In 2019, more than 40 universities, representing 11 countries on four continents, including 14 U.S. states, initially registered for the Indy Autonomous Challenge to develop the software necessary to win the IAC.

On October 23, 2021, the inaugural Indy Autonomous Challenge Powered by Cisco was held at the Indianapolis Motor Speedway (IMS), where 21 universities from 9 countries forming 9 teams competed in a fastest lap and obstacle avoidance competition. Teams used artificial intelligence (AI) to power their Dallara AV-21 racecars at IMS to win the \$1 million IAC grand prize. The winner of that competition was TUM Autonomous Motorsport – Technische Universität München (Germany).

On January, 7, 2022, at the Las Vegas Motor Speedway, 19 universities from 8 countries forming 9 teams will seek to compete in a head-to-head, high-speed passing competition that has never been done before by autonomous racecars.

University Teams Seeking to Compete in the Autonomous Challenge @ CES

There are 19 universities, from 8 countries forming 9 teams seeking to compete in the Autonomous Challenge @ CES:

- **AI Racing Tech** – University of Hawai'i, University of California San Diego
- **Autonomous Tiger Racing** – Auburn University
- **Black & Gold Autonomous Racing** – Purdue University, United States Military Academy at West Point with Indiana University-Purdue University Indianapolis, Indian Institute of Technology Kharagpur (India), Universidad de San Buenaventura (Colombia)
- **Cavalier Autonomous Racing** – University of Virginia
- **KAIST** – Korea Advanced Institute of Science and Technology (South Korea)
- **MIT-PITT-RW** – Massachusetts Institute of Technology, University of Pittsburgh, Rochester Institute of Technology, University of Waterloo (Canada)
- **PolimOVE** – Politecnico di Milano (Italy), University of Alabama
- **TII EuroRacing** – University of Modena and Reggio Emilia (Italy), Technology Innovation Institute (United Arab Emirates)
- **TUM Autonomous Motorsport** – Technische Universität München (Germany)

THE RACECAR: THE IAC DALLARA AV-21

The IAC Racecar: The official racecar that all IAC teams use is the IAC Dallara AV- 21, which has been retrofitted with hardware and controls to enable automation. The IAC Dallara AV-21 is the most technologically advanced, fastest autonomous racecar ever assembled with a highly advanced package of equipment including a modified-for-autonomy Indy Lights chassis from Speedway's very own Dallara USA, a 4-cylinder turbocharged beast of an engine, converging a host of lidar, radar and optical camera sensors with screamingly quick on-board rugged-edge computing and communications, all coupled with cutting-edge artificial intelligence algorithms.

Safety and Performance: These advanced hardware and next generation software systems have been synthesized to create the most optimized and powerful platform for safety, precision control and performance — the Dallara AV-21, a \$1 million technical marvel. Add to that, the best and brightest university minds in the world, and the result is a comprehensive prize competition which will help advance technologies, as well as better public understanding of autonomous vehicles.

FOR MORE INFORMATION

IAC WEBSITE

The IAC website IndyAutonomousChallenge.com has detailed information about the Challenge, the university teams and a media page filled with stories, photos and video. The IAC also has a monthly newsletter, THE LEADERBOARD, which you can sign up for on the IAC website.

IMPORTANT RESOURCES

Media Resources (video and photos): [IAC Website/Media](#)

Media Credentials and Interviews:

- Media interested in attending the Autonomous Challenge @ CES at the LVMS and/or conducting one-on-one interviews with IAC principals or teams, should contact **Allison Fried (IAC@onemorevolley.com)**. **(Only CES 2022 credentialed attendees and media will be permitted to attend).**

MEDIA CONTACTS

- **CES 2022 National/International:** Allison Fried (IAC@onemorevolley.com)
- **National/International:** Diane Murphy, (diane@aquariusgroup.net) +1.310.658.8756
- **Indiana:** Raquel Bahamonde, Senior Director of Communications, Energy Systems Network/IAC, (rbahamonde@cicpindiana.com) +1.317.319.6875

IAC SOCIAL MEDIA

- You can follow the IAC and the teams on social media using the handle **@IndyAChallenge** on **LinkedIn, Twitter, Facebook, Instagram, YouTube**.
- Hashtag **#IAC2022**