Indy Autonomous Challenge Organizers and Sponsors

**The Indy Autonomous Challenge** (IAC), organized by Energy Systems Network (ESN) and the Indianapolis Motor Speedway (IMS), is a $1.5 million prize competition among universities to program modified Dallara IL-15 racecars and compete in the world’s first autonomous head-to-head race around the famed Indianapolis Motor Speedway on October 23, 2021. Racing at speeds of up to 200 mph, the primary goal of the Challenge 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 racing and commercial transportation. In addition, the competition is a platform for students to excel in Science, Technology, Engineering and Math (STEM).

**Organizers**

**Energy Systems Network**, a branded initiative of the Central Indiana Corporate Partnership (CICP), is a non-profit industry consortium of companies and institutions focused on the development of the advanced energy and mobility technology sectors. ESN was founded in 2009, with the explicit mission to accelerate the pace of energy and transportation technology development and commercialization in Indiana and beyond.

The **Indianapolis Motor Speedway**, the world’s largest spectator sporting facility, has been the worldwide leader in motorsports entertainment since opening in 1909. IMS hosts the Indianapolis 500 presented by Gainbridge, the world’s largest single-day annual sporting event, which features the stars of the NTT INDYCAR SERIES. The Speedway also annually hosts the stars of the Monster Energy NASCAR Cup Series, NASCAR Xfinity Series and USAC NOS Energy Drink Midget National Championship during the Big Machine Vodka 400 at the Brickyard Powered by Florida Georgia Line event week, which also includes the Indiana 250 and Driven2SaveLives BC39 powered by NOS Energy Drink. Living up to its reputation as a bucket list sporting venue featuring a diverse variety of racing, throughout the 2020 season IMS also will welcome the competitors of the MotoAmerica motorcycle series and the Intercontinental GT Challenge Powered by Pirelli and GT World Challenge America sports car championships. Visit [IMS.com](https://www.ims.com) for a full list of dates and ticket purchase options.
**Sponsors**

**ADLINK**
ADLINK’s mission is to affect positive change in society and industry by connecting people, places and things with AI. In partnership with The Autoware Foundation, Open Robotics and Eclipse Foundation, ADLINK is working to provide the IAC Teams with open source autonomous driving tools and options that they can use to further their efforts. The company’s offerings include robust boards, real-time data acquisition, ROS / ROS 2 controllers and application enablement for rugged Edge AI. ADLINK is a Premier Member of the Intel® IoT Solutions Alliance, an NVIDIA Elite Partner and a committed contributor to open source.

**Ansys**
If you’ve ever seen a rocket launch, flown on an airplane, driven a car, used a computer, touched a mobile device, crossed a bridge, or put on wearable technology, chances are you’ve used a product where Ansys software played a critical role in its creation. Ansys is the global leader in engineering simulation. Founded in 1970, Ansys employs nearly 4,000 professionals, many of whom are expert M.S. and Ph.D.-level engineers in finite element analysis, computational fluid dynamics, electronics, semiconductors, embedded software and design optimization. Ansys VRXPERIENCE simulator has been designed and developed to support this type of iterative process for cutting-edge, driverless systems. The complete solution extends from component-level model-in-the-loop (MIL) testing through system-level verification and validation using software-in-the-loop (SIL) and hardware-in-the-loop (HIL) simulation. VRXPERIENCE also accounts for human factors by simulating human-machine interaction (HMI) behaviors in a 3D virtual environment. Ansys SCADE Suite is a model-based development environment for safety-critical embedded software such as autonomous driving control software.

**Aptiv**
Aptiv is a global technology company that develops safer, greener and more connected solutions, which enable the future of mobility.
Hexagon is a global leader in sensor, software and autonomous solutions. The company is putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications. Hexagon’s technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

**AutonomouStuff**, part of Hexagon, is a global technology leader, pioneering solutions for R&D platforms, products, software and engineering services for the advancement of robotics and autonomy systems.

Nashville, Tennessee-based **Bridgestone Americas, Inc.** is a subsidiary of Bridgestone Corporation, a global leader providing sustainable mobility and advanced solutions. Bridgestone Americas develops, manufactures and markets a diverse portfolio of original equipment and replacement tires, tire-centric solutions, mobility solutions, and other rubber-associated and diversified products that deliver social value and customer value. Guided by its global corporate social responsibility commitment, **Our Way to Serve**, Bridgestone is dedicated to shaping a sustainable future of mobility and improving the way people move, live, work and play. Through its Firestone brand, which is the Official Tire of the NTT INDYCAR® SERIES and the Indianapolis 500®, Bridgestone Americas has a history of world-class performance at Indianapolis Motor Speedway® that dates back more than a century to the inaugural Indy 500® in 1911.

The **Clemson University International Center for Automotive Research (CU-ICAR)** is home to the nation’s only graduate Department of Automotive Engineering. On campus, over 200 Clemson University students are pursuing Master of Science and/or Ph.D. degrees in Automotive Engineering. **Deep Orange** is a framework within Clemson University’s Department of Automotive Engineering that immerses graduate students into the world of a future OEM and/or supplier. Working collaboratively, students, multi-disciplinary faculty, and participating industry partners focus on producing a new vehicle prototype each year. Each project incorporates integrating breakthrough product innovations and new processes — providing the automotive engineering students with hands-on experience in vehicle design, engineering, prototyping and production from the time they enter into the academic program until graduation. Students lead the project and are ultimately responsible for the quality of the vehicle they produce. The program offers both big challenges and rewards. Automotive engineering master’s students have the opportunity to participate in the Deep Orange project in lieu of an industrial internship. For more information on Deep Orange please visit the **project’s website**.
Dallara, the exclusive chassis supplier to the NTT INDYCAR SERIES, was founded by its current president, Giampaolo Dallara, in 1972. After working for Ferrari, Maserati, Lamborghini and De Tomaso, Dallara wanted to continue pursuing his dream of working in the world of racecars. He established "Dallara Automobili da Competizione" in his hometown of Varano de Melegari, Parma, in the Italian Motor Valley. Since its establishment, Dallara has become world renowned for its specialty in designing, manufacturing and developing racecars.

The company’s success can be credited to its achievements in Formula 3, first in Italy and then around the world. Its American acclaim can be traced to its involvement since 1997 with the NTT INDYCAR SERIES, its consultancy for major manufacturers and its continued focus on technology and innovation. Dallara’s core competencies include design using carbon fiber composite materials, aerodynamics by means of wind tunnel and CFD (computational fluid dynamics), vehicle dynamics through simulations and testing, and the fast and flexible production of high-quality prototypes.

Dallara partnered with state universities, as well as with several school districts in the Indianapolis area, to make scientific subjects attractive to students through the use of motorsports. Dallara makes part of its museum available to the STEM program focused on motorsport (M-STEM). This special area demonstrates the relationship between INDYCAR development and production and basic concepts of science and mathematics.

The Indiana Economic Development Corporation (IEDC) of the State of Indiana is committed to attracting and supporting new business investment, creating new jobs for Hoosiers, and furthering our legacy as one of the top states in the nation for business.

- The IEDC aggressively pursues every opportunity that represents a promise for Hoosier jobs, and competes locally and at a state level to win these opportunities.
- It attempts to match the interests of new clients and the local community, creating business plans that work for all parties concerned.
- It seeks opportunities to attract new business and grow Indiana’s companies and improve the economy.
Microsoft accelerates the transformation of automotive companies from traditional manufacturers to mobility service providers building omnichannel personalized experiences for their customers. Utilizing insights collected across customer touchpoints, the vehicle, employees, and manufacturing, Microsoft empowers them to accelerate technology innovation and monetize their own data through new services, redefining mobility as an industry. Microsoft does this by focusing on trust, innovation, security, and compliance, all powered by our extensive global partner ecosystem.

New Eagle delivers solutions for a fast path to production. Autonomous cars. Electric vehicles. Unmanned aerial systems. When it comes to technology built on mechatronics, New Eagle delivers solutions for a fast path to production. From a reliable supply chain of production hardware to professional engineering support, New Eagle gives developers control of their projects with each step toward production.

A key component to helping customers get to production fast is New Eagle’s Raptor™ controls platform, which allows developers to use robust model-based software tools to create production-ready systems upfront – to avoid system reworks and maintain full control of IP.

Headquartered in Ann Arbor, Michigan, New Eagle is a WBENC-certified business known for its state-of-the-art technology advancements in EV/HEV and autonomous industries, including drive-by-wire solutions across numerous vehicle platforms.
PWR provides world class cooling solutions by manufacturing high performance aluminium radiators, intercoolers and oil coolers for race cooling solutions to leading race categories and teams such as F1, NASCAR, V8 Supercars, Deutsche Tourenwagen Masters and World Rally Championship, PWR is recognised as a world leader when it comes to high performance cooling.

Our state-of-the-art manufacturing facility in Australia includes a controlled atmosphere brazing furnace, CNC machine shop, R&D and design department, large fabrication capabilities and an in-house wind tunnel which allows PWR to be the market leader in cooling research and development with focus on competition cooling solutions. When entering into a relationship with its customers PWR does not just sell them a product but partners with them to develop cooling solutions where the customer can use PWR’s engineering department and manufacturing facilities to purpose build the right solution.

The flexible manufacturing approach, which sets PWR apart from its competitors, is due to every aspect of the manufacturing process being completed in its own purpose built facility.

PWR can guarantee a top quality product whilst offering its customers around the world quick turnaround times and the unique opportunity to customise their products to suit their specific cooling requirements.

Real-Time Innovations (RTI) is the largest software framework provider for smart machines and real-world systems. The company’s RTI Connext® product enables intelligent architecture by sharing information in real time, making large distributed applications work together as one.

RTI Connext Drive™ is the automotive-specific software framework used by engineering teams to accelerate the development and deployment of autonomous vehicles. Proven through millions of hours of operation in critical autonomous systems, RTI Connext Drive works interoperably with AUTOSAR Classic, AUTOSAR Adaptive, ROS/ROS2 and other standard-based systems.

With over 1,500 deployments, RTI software runs the world’s most rigorous systems including autonomous vehicles; space launch and exploration; traffic control; industrial automation; connected healthcare; robotics, UAVs and combat management.

RTI is the leading vendor of products compliant with the Object Management Group® (OMG) Data Distribution Service™ (DDS) standard. RTI is privately held and headquartered in Sunnyvale, California with regional headquarters in Spain and Singapore, and is providing Indy Autonomous Challenge university teams with a number of resources for use in the competition.
SCHAEFFLER

For more than 70 years, the Schaeffler Group has pioneered motion to advance how the world moves. As a leading supplier and technology partner to the global automotive industry, Schaeffler is dedicated to making motion and mobility more efficient, intelligent, and sustainable. Specializing in the development and production of solutions for the challenges facing the evolving mobility industry, Schaeffler manufactures high-precision components and systems for drive train and chassis applications, as well as products across the full bandwidth of electrification options.

With generated global sales of approximately EUR 14.4 billion in 2019 and approximately 83,700 employees around the world, Schaeffler is one of the world’s largest family companies. The company has a strong North American presence with its regional headquarters in Fort Mill, S.C. and manufacturing facilities located in South Carolina, Missouri, Ohio, Canada and Mexico. Schaeffler also has three R & D centers in North America pioneering new methods of motion, including the Automotive Center in Troy, MI.

Valvoline Inc. (NYSE: VVV) is a leading worldwide marketer and supplier of premium branded lubricants and automotive services, with sales in more than 140 countries. Established in 1866, the company’s heritage spans more than 150 years, during which time it has developed powerful brand recognition across multiple product and service channels. Valvoline ranks as the No. 3 passenger car motor oil brand in the DIY market by volume. It operates and franchises approximately 1,400 quick-lube locations, and it is the No. 2 chain by number of stores in the United States under the Valvoline Instant Oil Change℠ brand and the No. 3 chain by number of stores in Canada under the Valvoline Great Canadian Oil Change brand. It also markets Valvoline lubricants and automotive chemicals, including the Valvoline High Mileage with MaxLife technology motor oil for engines over 75,000 miles; Valvoline Advanced Full Synthetic motor oil; Valvoline Premium Blue™ heavy-duty motor oil; Valvoline Multi-Vehicle Automatic Transmission Fluid; and Zerex™ antifreeze.

To learn more, visit www.valvoline.com.
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