



## Sponsorship Package

## The Team

We are a team of students and postdocs from Graz University of Technology and Virtual Vehicle Research highly interested and experienced in automotive sensors, software, and control with the spirit to make autonomous racing happening. Our vision: *“We would like to prove and demonstrate autonomous driving at the edge (high speeds, high lateral dynamics, adverse weather conditions) to build trust and acceptance in such systems”* and *“serious research and fun can go together”* Since 2019, we have been one out of several teams of the ROBORACE competition (Season Alpha in 2019, Season Beta in 2020/21), working on three main challenges in autonomous racing: performance, precision and wheel-to-wheel racing. Since 2020, we are also one out of 31 teams competing in the Indy Autonomous Challenge.

Find more information about ARG: <https://autonomusracing.ai/>

## The Goal

The team is working on embedded artificial intelligence and its software implementation, which is first tested in simulations and then in autonomous racing cars and research vehicles. The Virtual Vehicle Research Center provides its autonomous research vehicles (Ford Mondeo platforms) for development and validation. The necessary software components and algorithms of the overall "Sense-Plan-Act" architecture are systematically developed, improved, and optimized for high driving speeds and driving dynamics in racing.

Starting in 2021, the team will take part in the Indy Autonomous Challenge (IAC). Our developments will be implemented into a Dallara IL-15 race car with the goal to be the first across the finish line.

The tasks required to be successful in the final race will be accomplished through a combination of self-driven learning and guided learning set out by the IAC competition organizers. The organizers have developed a series of hackathons to introduce the team to the platform that will be used for the competition. This includes working with a simulator to validate algorithm design and eventual use of the IL-15 car for the final race.



## The Competition

The competition consists of five rounds, with round 4 and 5 taking place at the famous Indianapolis Motor Speedway (IMS).

In the first round a white paper about the team and its approach for the competition had to be submitted, which the ARG team passes very successfully.

For the second round a 2-3 minutes demo video of a team-supplied and -programmed automated passenger car that demonstrates a range of functions needs to be prepared.

The third round is a simulation race: each team has to complete 10 virtual solo laps around the IMS oval (~25 miles) on an organizer-supplied and standardized automated vehicle simulator in 15 minutes or less.

Round four and five relate to the final race of the competition and will take place at the Indianapolis Motor Speedway. The fourth round is the qualifying race and the fifth round is the grand finale where the autonomous race cars will be tested in a 20-lap race.

For additional information on the competition please visit: [www.indyautonomouschallenge.com](http://www.indyautonomouschallenge.com)

## Your Contribution and Support

Through initiation of a corporate sponsorship with us, we can develop a cooperative partnership with our unique team. Sponsorship directly supports the educational and professional advancement of our engaged team members through participation in the Indy Autonomous Challenge competition.

We are currently looking for support to cover the acquisition and maintenance costs of the modified Dallara IL-15 race car which every participating team must purchase (which is 300.000 USD). In addition, travel expenses to participation in the competition events taking place at the Indianapolis Motor Speedway in Indianapolis, USA, need to be covered.

## Why

- Have your branding on the world's **most advanced, fastest autonomous vehicle** – ready to compete.
- **Fuel innovation** – be on the forefront of a new technology and bring autonomous driving to the limit.
- **Benefit from the marketing reach of the Indy Autonomous Challenge** and the Indianapolis Motor Speedway – the birthplace of motorsports.



Dallara IL-15 race car © IAC (launched during the CES 2021 as the most advanced and fastest autonomous vehicle ever built)

## Available Packages

	<b>Bronze</b> €1.000 or more	<b>Silver</b> €4.000 or more	<b>Gold</b> €8.000 or more	<b>Platinum</b> €15.000 or more
<b>Name on Website</b>	Yes	Yes	Yes	Yes
<b>Team Cap/T-shirt</b>	Yes	Yes	Yes	Yes
<b>Social Media Recognition</b>	Yes	Yes	Yes	Yes
<b>Logo or Name on race car</b>		Small Logo	Medium Logo	Large Logo
<b>Invitation to final race</b>				Yes
<b>Involved in SW Development</b>				Yes

**Please note:** Contributions can take the form of money, equipment, or materials.

## Contact Information

Daniel Watzenig

[daniel.watzenig@tugraz.at](mailto:daniel.watzenig@tugraz.at)

Lisa-Marie Schicker

[lisa-marie.schicker@v2c2.at](mailto:lisa-marie.schicker@v2c2.at)