



November 2021 Newsletter

New Committee

After a difficult year under lockdown, the team has come back from the summer holidays refreshed and ready for the 2021/22 season. This year TAU Racing once again welcomes a new mix of individuals to its committee, consisting of both new faces and senior members.



Return to Garage

As government guidelines have eased over the past few months, not only have the students of the University of Aberdeen been able to attend their classes on campus, but the easing of the rules has also meant that the team have been able to hold its committee meetings in person.

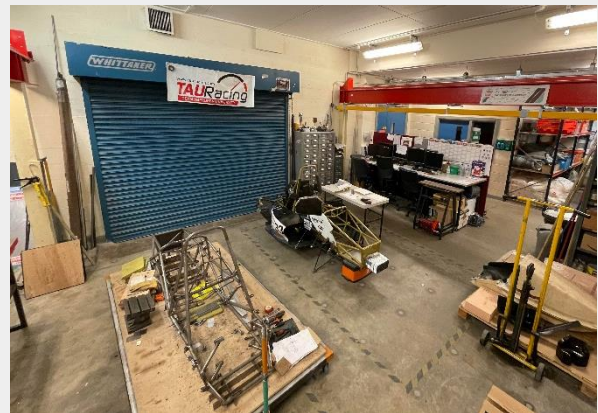
TAU is happy to announce that after two years the team is now once again able to go into the garage to work on their vehicle. Due to the current university guidelines there is a restriction on the number of people who are allowed to enter the garage at the same time. As a solution, a rota has been introduced to allow all committee members to come into the garage.

We are also glad to announce that alongside the committee meetings, we are now able to open the

doors of the garage to all team members as well. On the 17th of November the team held its first in person Wednesday session of the year, welcoming both new and returning members to come in and interact with their respective department heads. Although not all of the departments are able to come in for the session at the same time due to COVID guidelines, the opening of the garage and the teaching lab TL1 is a massive step forward and is a great opportunity to allow team members to help their department heads in the manufacturing process of the TAU car.

New committee role – First Year Representative

This year the team has introduced a new role, the First Representative. The 1st year representative's main responsibility is to be the voice of all new members of TAU Racing in front of the committee, to listen, collate and communicate their views and opinions regarding but not limited to team dynamics, tasks and general involvement.



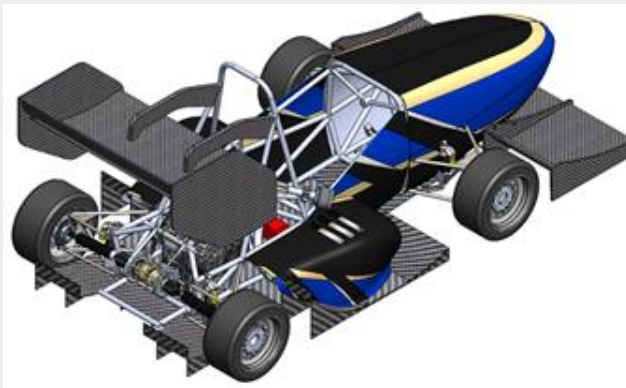
Manufacture of the TAU – 20 and TAU – 22 Car

For this academic year the team will be building two cars, the TAU-20 and TAU-22 car. Due to the pandemic, the manufacturing of TAU-20 was put on hold in March 2020 and, due to the team not having access to the garage until recently, was never

finished. Now that we are back in the garage, TAU-20 will be finished and used as a test vehicle to help validate and optimize the design of TAU-22 by using a variety of sensors.

Besides the validation of the design of TAU-22, another benefit of finishing TAU-20 is that its manufacturing process will give the members the opportunity to gain more hand-on experience, which is, considering that the 2 years the team had to miss out, is more necessary than ever.

The manufacture of TAU-20 is planned to be completed by the 5th December, followed by 6-8 weeks of testing in January before the team go back into the garage to start manufacturing TAU-22.



Department spotlight – Aerodynamics & Composites

Who are you?

"My name is Sam Huntington and this year I am head of the Composites and Aerodynamics department for TAU Racing. This will be my fourth year competing with the team as I continue my degree in Mechanical Engineering."

What challenges do you face as department head?

"This year is set to be a challenge for our department and the team as we plan to manufacture two cars. With the ongoing pandemic we have been unable to get into the garage to manufacture the car for the past 18 months, so we had to adapt. Instead, we have been communicating with all members using Microsoft Teams and designing new concepts to improve the cars performance on track. Now, heading back into the garage this year, it has been important for me to re-learn the key manufacturing techniques. After a long period of time off with no practical work it can be easy to forget manufacturing techniques you have learnt from previous department heads. As head, with my gained knowledge and practicability, it is now important for me to teach the new members in the team so we can all create parts at the highest quality."

What will need to do in this coming year?

"Although it will be a challenging year for us building two cars, it is also a very exciting one as we have many new designs to be manufactured onto the car. These include a new undertray, nosecone and the implementation of front and rear wing system for the first time."

What was required in the implementation of wings this year?

"Front and rear wings have always been an ambition of mine to add to the TAU car since joining back in 2018. Last year Jack Pirie, last year's co-head, and I completed the design with the goal of increasing the cars speed round corners. To achieve this many CFD simulations were run with multiple aero foil arrangements to produce the highest downforce with minimal drag. It was crucial that other departments such as chassis were in discussion with the new concept as this would affect their design with the mounting system."

Outreach Programme

As one of the aims of the team is to introduce younger students the idea of STEM, TAU reached out to multiple secondary schools in Aberdeenshire with an introductory video about STEM and briefly about the team. The team have also presented the students a small competition which involves designing a livery for the TAU-22 car, which might be used as inspiration for the actual livery.

The team has now extended their scope to primary schools as well, and a new video is in the works to introduce more students to STEM and its importance.

Upcoming

In the following semester, TAU will be taking the fully manufactured TAU-20 vehicle to winter testing over the course of around 6-8 weeks, and with the gained data, the departments will get started with optimizing their designs and then with the manufacturing of the TAU-22 vehicle.

Until then, make sure to stay tuned via our social media outlets, and look out for any exciting developments that the team will bring this academic year.



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