



Tshwane University of Technology Solar Team

Sunchaser 4

The Tshwane University of Technology established a solar car team in 2012 and partnered with a Welsh solar car team to participate in the 2012 Sasol Solar Challenge.

The team received three accolades:

- Third place FIA Olympia Class Sasol Solar Challenge
- The South African record for most kilometres in a single day (previously held by an international teams)
- Most re-engineered car during the challenge

In 2014, working as a group of staff and students, and applying their newly developed skills from the previous event, they managed to put together their first competitive solar car that delivered outstanding results. The team received the awards for professionalism and safety.

In the 2016, the team had a lot in store for the event. They started focusing on developing a monocoque design, carbon fibre manufacturing, battery management, highly efficient photovoltaic and charge controllers, solar car monitoring, telemetry and weight improvement. Their solar car was 80 kg lighter compared to the previous car. They also managed to increase their maximum kilometres travelled in one day from 253 km to 318 km.

In the 2016 Sasol Solar Challenge, the team received the following awards:

- Fifth place overall and second place South African team in the Challenger Class
- The Sasol Solar Challenge Environmental Award

Despite the 33% smaller solar panel enforced by new regulations for the 2018 Sasol Solar Challenge, SunChaser 3 managed to travel more kilometres compared to SunChaser 2 - 2 397km in eight days.

The team received the following awards:

- Most kilometres travelled in one day (493km) and most total kilometres by a South African team
- The Africa Ubuntu award
- The International Solar Federation Award for exhibiting what Solar Racing is about

Building on the success of SunChaser 3, SunChaser 4, designed for the 2022 Sasol Solar Challenge, will have 30% less aerodynamic drag and the team anticipates a weight reduction of 20-40 kg.

Other improvements include the suspension, steering and surface finish of the car.