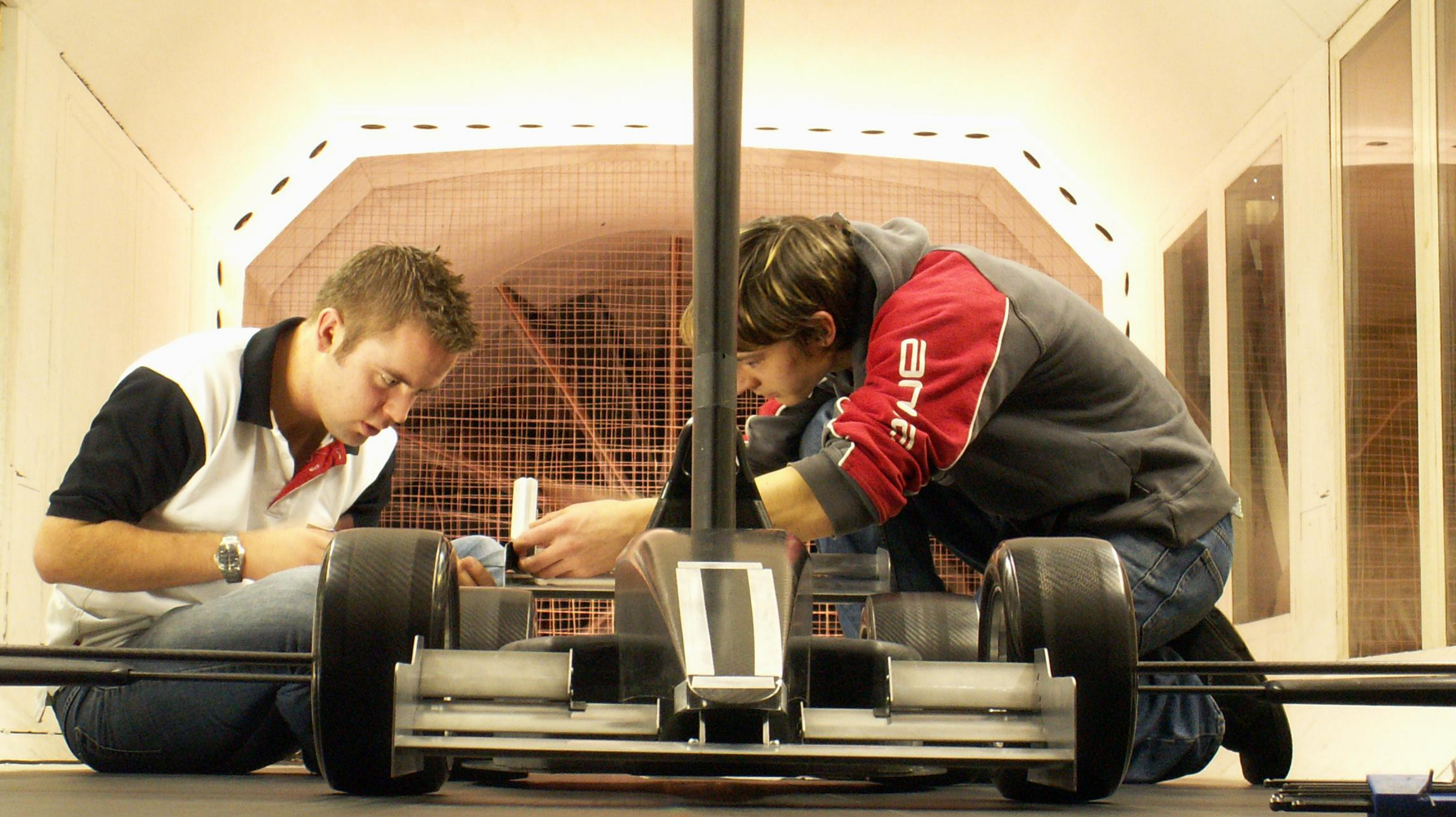


The Wind Tunnels

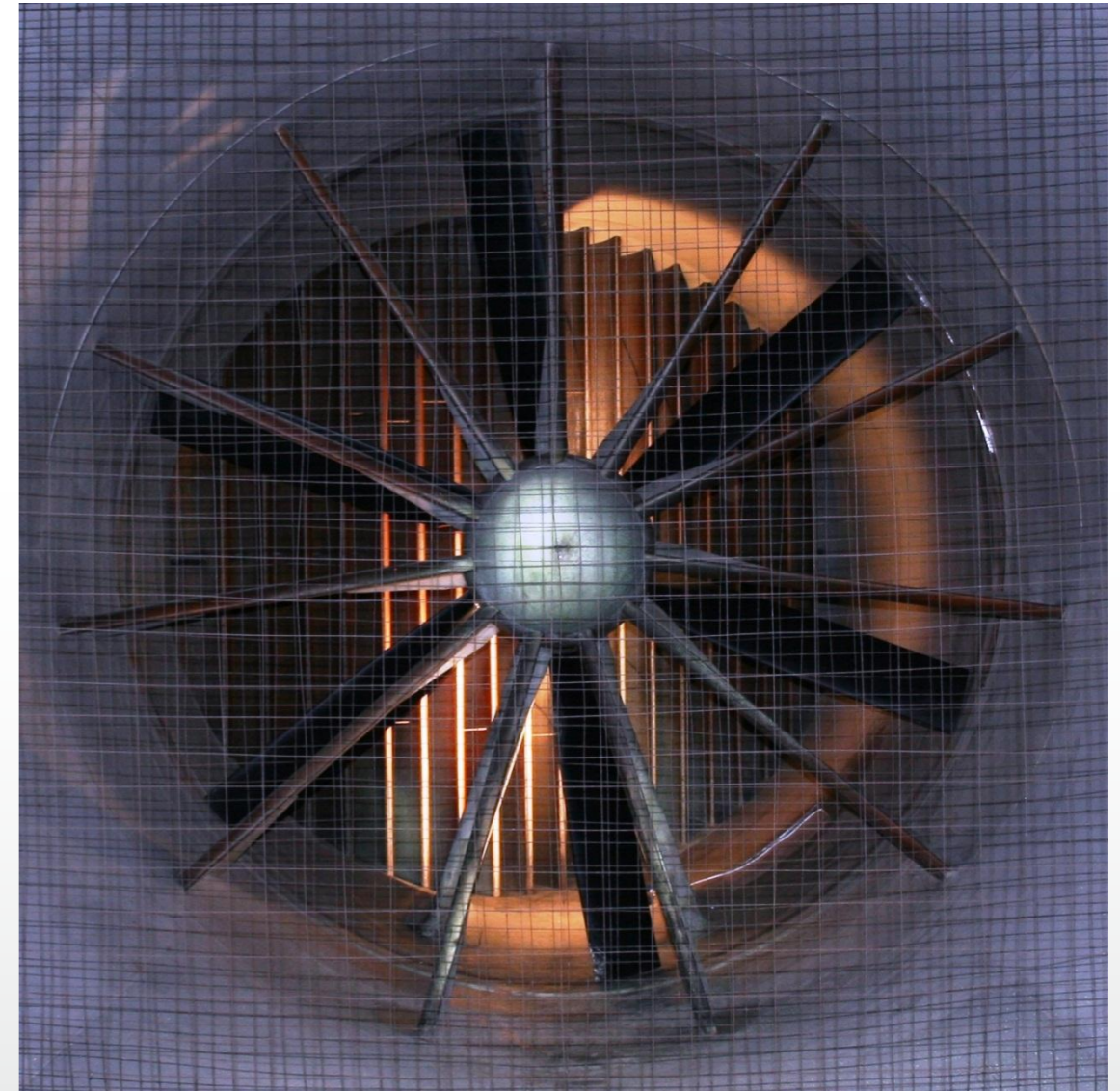
At the University of Southampton

Our Facilities



The R. J. Mitchell Wind Tunnel

- Largest of the University's three tunnels
- Extensively equipped low speed wind tunnel facility
- 3.6m x 2.5m working section with moving ground and a maximum wind speed of 50m/s
- Ideally suited for vehicle aerodynamic work



The fan installed in the R.J. Mitchell wind tunnel can produce wind speeds up to 50m/s

Smaller Tunnels

- The 7'x 5' wind tunnel
 - Has a slightly smaller 2.1 m x 1.5m working section, with speeds up to 55 m/s, and is used extensively for undergraduate and postgraduate research projects.
- The 3'x 2' tunnel
 - Has a 0.9 m x 0.6 m x 4.5m working section. It is used for a variety of aerodynamics research and student project work.

History of the Tunnels

History

- First University in the country to have a moving ground system that could be used for testing motor racing cars.
- Installed in the 1960s, it attracted the business of Formula 1, Indy Racing League and CART racing teams and world-leading aerospace companies.
- As demand grew expansion became necessary and the then Royal Aircraft Establishment at Farnborough donated their wind tunnel (The R. J. Mitchell tunnel).

Diversification

- Eventually the racing car industry began to build their own wind tunnel facilities.
- The University has responded by building partnerships with high-performance sports bodies around the world, including those representing competitive sailing, Formula 1, cycling, swimming and winter sports.
- Tunnels are also frequently used by undergraduate and post graduate students.

Research and Enterprise

Racing Car Aerodynamics

- In the field of motor racing, our researchers helped pioneer the rolling road wind tunnel, the tool of choice for race and sports car development.
- We have developed Formula 1 World Championship-winning cars for Brabham, Tyrell, and Williams, and are still recognised as a leader in ground effect aerodynamics.

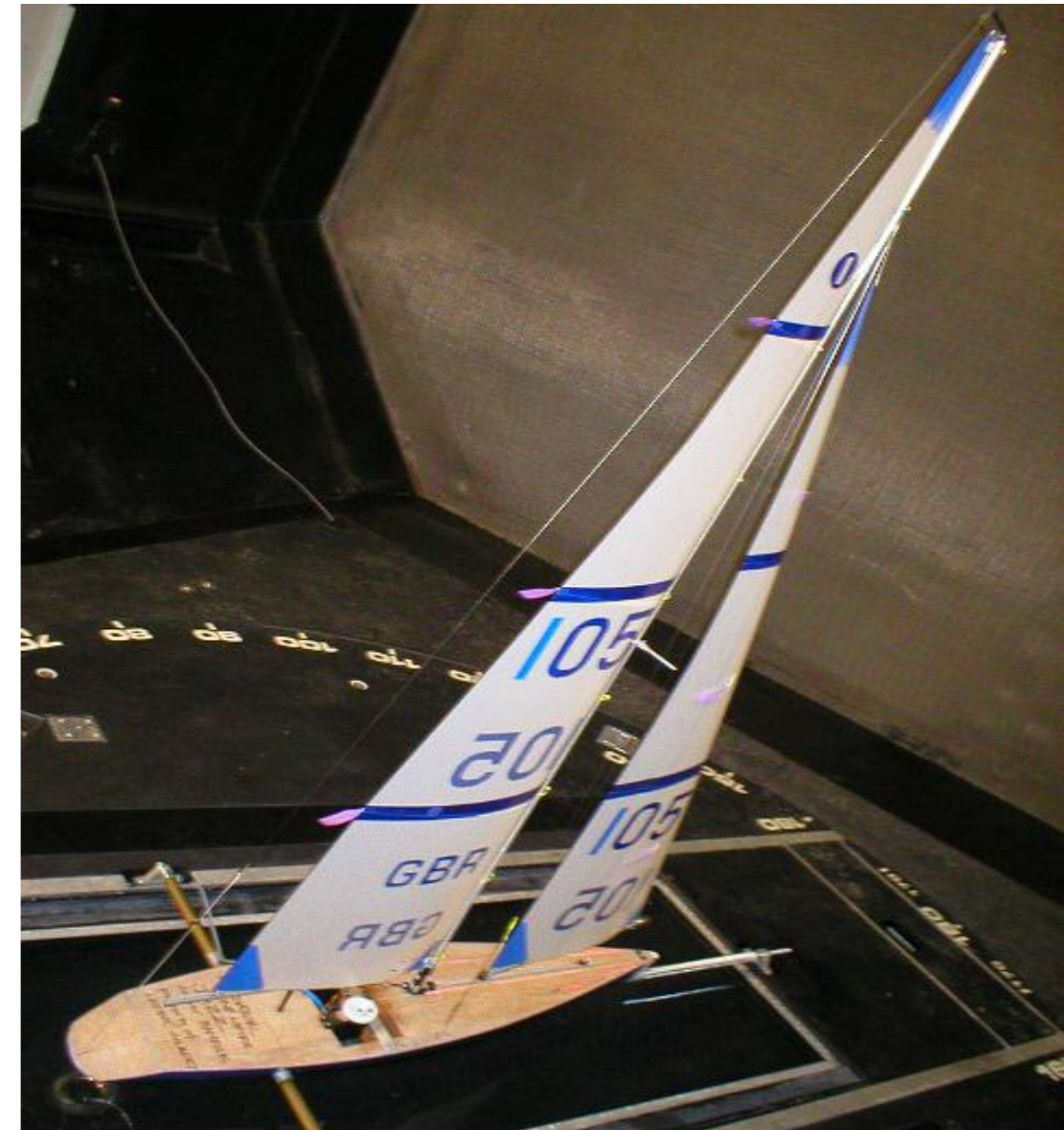


UK Sports Engineering

- Earlier this year we were awarded a prestigious **Queen's Anniversary Prize** for Higher and Further Education for our innovation and world-leading expertise in performance sports engineering.
- Over 200 hours of wind tunnel testing helped British Skeleton athlete Amy Williams find her optimum riding position and achieve her gold medal win in 2010.
- Her sled 'Arthur' was designed by graduate students.

Wolfson Unit for Marine Technology & Industrial Aerodynamics

- The University's Wolfson Unit for Marine Technology and Industrial Aerodynamics is an innovation partner to UK Sport.
- It contributes to sporting performance in a number of areas including cycling.



The Wolfson unit conducts maritime consultancy work for yacht, ship and power boat manufacturers.

Wolfson Unit for Marine Technology & Industrial Aerodynamics

- Over 35 years of consultancy service in ship design, yacht design, small craft design, naval architecture, marine technology and industrial aerodynamics, supplying innovative research to a worldwide customer base.
- Our clients include:

Humphreys Yacht Design

Hoek Design Naval Architects

Ron Holland Design

Van Oossanen & Associates

Dubois performance Yachts

UK Sport

Aircraft Wing Aerodynamics



The tunnels are used for research into optimising aircraft wing aerodynamics