

R.J. Mitchell Wind Tunnel

University of Southampton, UK



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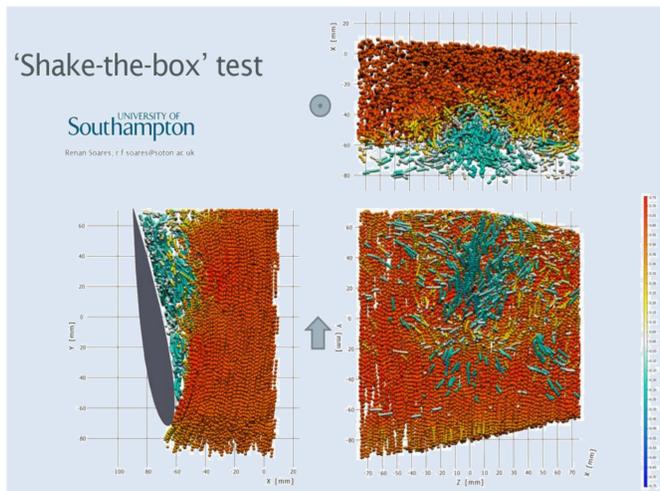
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Automotive Aerodynamics

This facility's F1 heritage is still carried on with experimental studies and commercial services in automotive aerodynamics, where automated struts and moving ground systems allow testing at road conditions for models of up to 50% scale.

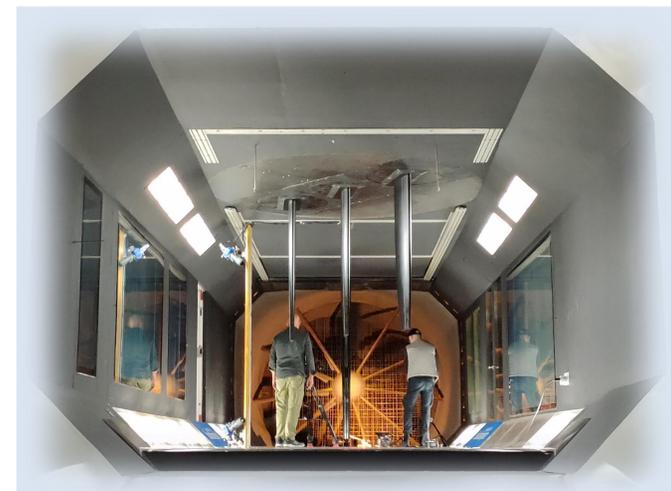
Owned frontal full-scale F1 assembly and 50%-scale F1 wind tunnel car model support academic activities, including the MSc Race Car Aerodynamics.



Aeronautics Aerodynamics

The historical reason for the development of the RJ Mitchell Wind Tunnel in Farnborough – lately transfer to Southampton, aeronautical aerodynamics remains a key field for experimental projects at University of Southampton.

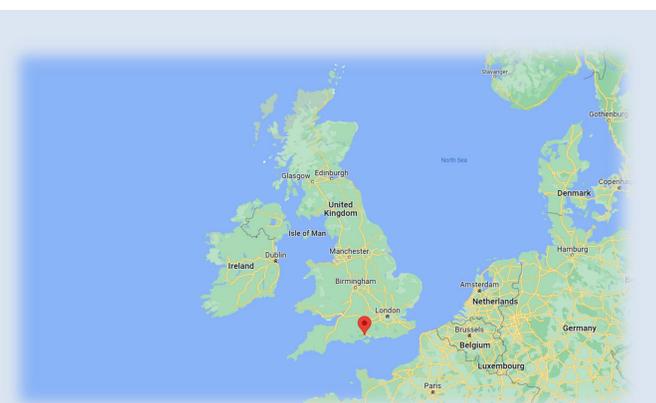
A automated turntable allows efficient studies of wings and aircraft models, even full-scale drones; while constantly exploring advances in experimental methods.



Marine Aerodynamics

While a range of marine vehicles are based on aerodynamic propulsion by sail and wings, marine design projects in wind tunnel typically focus on the aerodynamic performance of these propulsion solutions.

Experimental studies varies from (i) intrinsic characteristics of fundamental aerodynamics in marine aerodynamics conditions; (ii) sail and wings design performance, and (iii) novel propulsion concepts.



- Working section 3.5m wide, by 2.4m high, by 10.5m long, with a speed range up to 40 m/s and nominal turbulence below 0.2%.
- Stationary and Moving ground options; where a moving belt 1.95m wide by 4m long can sustain up to 40 m/s.
- Overhead balance and a strut-mounted 'in-car' balance, both 6-component options.
- Temperature-controlled freestream adjustable between 10°C and 35°C.

