

Energy Technology Research Group

UNIVERSITY OF
Southampton

The Faculty of Engineering and the Environment is one of the leading engineering faculties in Europe, with a strong focus on addressing real world problems. The **Energy Technology Research Group** is a multidisciplinary team engaged in cutting-edge research on sustainable energy technologies and their mainstream applications. Our activities are supported by world-class computing and experimental facilities, and are funded by UK research councils, Innovate-UK, industry and the EU.



Research Areas

- Fuel cells and redox flow batteries
- Batteries and Energy Storage systems
- Clean Combustion Technology
- CFD modelling
- CO₂ sequestration
- Cryogenics and Superconductivity
- Vehicle Dynamics and Control
- Hybrid and Electric Vehicles
- Enhanced Oil & Gas Recovery
- Materials, Tribology and Surface Engineering
- Nanostructured Materials for Energy Applications

Facilities

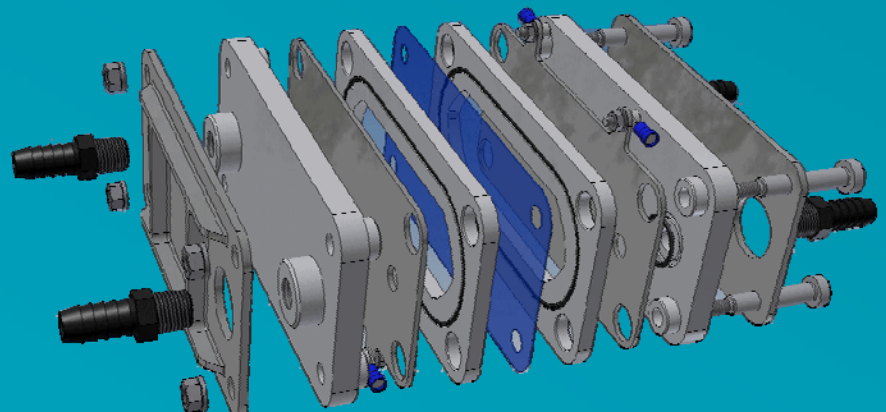
Flow cell and fuel cell rigs,
UV-Vis spectrometer Neosys-2000,
Hydrogen adsorption equipment PCTPro-2000.

High Performance Computing Platforms,
Single cylinder spark-ignition engine,
Four-cylinder spark-ignition engine.

Test bed for 100kW superconducting rotating electric machines,
Superconducting Cable test bed (up to 2.5kA, 5m long, 4.2K - 77K),
High magnetic field strength (>10T) current and coil characterisation,

Cobra Electric Vehicle,
Dynapro rolling road Dynamometer,
Multi-body simulation and optimisation tools.

High Performance Computing (Iridis4)
Gas Chromatography, Sunlight simulator,
Magneto Fluidised bed reactor, Electro-spinner,
Battery test systems, Thermal Camera.



Education

Undergraduate courses:

MEng Mechanical Engineering / **Sustainable Energy Systems**

MEng Mechanical Engineering / **Automotive**

Southampton University **Formula Student Team**

(www.facebook.com/SUFST)



Postgraduate courses:

CDT in Energy Storage and its Applications



Our team

please follow the [links](#) !

ACADEMICS	RESEARCH AREAS
Dr Lindsay-Marie Armstrong	Computational fluid dynamics
Dr Dmitry Bavykin	Nanostructured Materials and Energy application
Professor Andrew Cruden	Energy Storage, Electric Vehicles, Renewable Energy
Dr Zheng Jiang	Solar Fuels, CO2 capture and utilization, Energy efficiency
Dr Ranga Dinesh Kahanda Koralage	Clean Combustion of Low Carbon Fuels, Turbulent Combustion Simulation and Modelling
Professor Roberto Lot	Vehicle Dynamics and Control (Handling, Safety and Performance), Motorcycles
Dr Carlos Ponce de Leon	Fuel cells, Batteries
Dr Anatoliy Vorobev	Fluid dynamics, Multiphase flows, Phase transitions, Convection
Dr John Walker	Materials, Tribology and Surface Engineering
Prof Frank Walsh	Electrochemistry, flow and fuel cells
Dr Richard Wills	Energy Conversion, Redox Flow Batteries
Professor Yifeng Yang	Cryogenics, Superconductivity
Dr Edward Young	Cryogenics, Superconductivity, Nanomaterials

CONTACTS

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