

## Transportation Research Group

[http://www.southampton.ac.uk/engineering/research/groups/transportation\\_group.page](http://www.southampton.ac.uk/engineering/research/groups/transportation_group.page)

The Transportation Research Group (TRG) was established in 1967 and is based at the University's Boldrewood Innovation Campus. TRG is one of the UK's longest established and leading centres for engineering-related transport teaching, research and enterprise. Its work is interdisciplinary but with particular expertise in traffic engineering, transport economics and human factors. An integrated approach is taken, covering both passenger and freight transport and with a multimodal



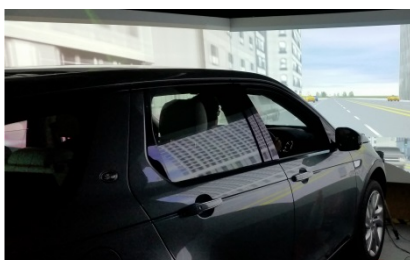
emphasis covering not only road and rail, but also aerospace and maritime transport. Emerging transport and communications technologies are studied, with particular expertise in Intelligent Transport Systems. Overall, transport is viewed as a socio-technical system with the potential to deliver sustainable outcomes through both mitigation and adaptation.

The Group currently consists of 7 Academics and around 15 Research/Technical staff, 12 Visiting staff and 2 Administrative Support staff. TRG holds grants and contracts worth over £10 million, funded by the Engineering and Physical Sciences Research Council, Innovation UK, the National Institute for Health Research, the European Commission, UK Governmental bodies (including the Department for Transport, Ministry of Defence, Network Rail, RSSB and Transport for London) and industry. There are good links with surrounding Local Authorities and TRG is part of the Centre for Sustainable Travel Choices in conjunction with British Cycling, Cycling UK, Hampshire County Council, Southampton City Council and Sustrans. Recent industrial partners include Arup, AgustaWestland, ATOC, BAE Systems, CitySprint, GE Aviation, GKN, the Go-Ahead Group, Jaguar Land Rover, Lloyd's Register, Network Rail, Siemens and TNT. TRG is a University Academic Partner of the Transport Systems Catapult and a founding member of ITS-UK.

The Head of the Group is [Professor John Preston](#), Professor of Rail Transport. Other academic members of TRG are:

- [Professor Neville Stanton](#), Professor of Human Factors in Transport
- [Professor Tom Cherrett](#), Professor of Logistics and Transport Management
- [Dr Ben Waterson](#), Lecturer, leading traffic modelling and operations research
- [Dr Simon Blainey](#), Lecturer, with a focus on transport economics and Geographical Information Systems
- [Dr Ioannis Kaparias](#), Lecturer in Transport Engineering.
- [Dr Katie Plant](#), Lecturer in Human Factors Engineering

We have a wide range of facilities supporting TRG research that includes:



- The Southampton University Driving Simulator (SUDS), which currently comprises a Land Rover Discovery vehicle and Triumph motorbike linked to the STISM Drive M500W – Wide Field-of-View System with Comprehensive Vehicle Dynamics Model and Active Steering.



- A fully Instrumented Vehicle (IV) for on-road measurements of vehicle kinematic characteristics, the proximity of surrounding vehicles, driver visual search behaviour, and driving environment/in-vehicle operations, all recorded in a data logging system. The IV is supported by a fully equipped garage where our Portable Emissions Monitoring System is also stored, along with our instrumented bicycle.



- The Command Team Experimental Testbed (ComTET) a command room simulator that is a representation of the ASTUTE submarine. The simulator is comprised of 10 workstations each with two stacked monitors, various input devices and a headset linked to a multi-channel communications network. The simulation engine is a custom build of Dangerous Waters software.



- A transportation data analysis facility that has a range of planning and modelling software and traffic data collection and processing equipment, including a continuous data feed from the Southampton Urban Traffic Management Centre (City Watch). Outreach demonstrators of rail and road traffic control have also been developed.

TRG is also involved in the development of a new £36m National Infrastructure Laboratory, to be built at the Boldwood Innovation Campus. This Laboratory (pictured below) will house state-of-the-art teaching and research facilities for geomechanics, heavy structures, solid mechanics and infrastructure engineering. The facilities will be used to develop new understandings of the behaviour of large structures and structural components, with an emphasis on infrastructure, rail and maritime engineering. This facility will provide a focus for TRG’s infrastructure research, building on recent links with Infrastructure UK and the National Infrastructure Commission.



TRG has run the [MSc Programme in Transportation Planning and Engineering](#) since 1969. This continues to be a highly successful Programme attracting over 30 full-time and part-time students each year. TRG staff also contribute to courses on undergraduate programmes, particularly in [Civil and Environmental Engineering](#).

TRG is part of the Faculty of Engineering and the Environment. The Faculty consists of four academic units (i) Aero, Astro and Computational Engineering (AACE) (ii) Civil, Maritime and Environmental Engineering and Science (CMEES) (iii) Mechanical Engineering and (iv) the Institute of Sound and Vibration Research. TRG is in CMEES, along with the Centre for Environmental Science and the Energy and Climate Change, Fluid Structure Interactions, Infrastructure, and Water and Environmental Engineering Groups.

The Faculty currently consists of about 180 members of academic staff, 170 researchers, 120 technical and administration support staff, 1,400 undergraduate and 800 postgraduate students. Results from the Research Excellence Framework (REF) 2014 confirmed our Faculty as the most powerful in General Engineering in the UK (UoA 15), based on the Times Higher Education (THE) definition. Furthermore, the Faculty was the most powerful individual single institution submission across all of the units of assessment in engineering.

The Faculty has world leading facilities in acoustics, bioengineering, high performance computation, fluid mechanics, materials and structures at the Highfield and Boldrewood Campuses. It also has a strong presence at the University's Malaysian campus and in Singapore, the latter through a joint venture with A\*STAR. The Faculty hosts three Centres for Doctoral Training in Energy Storage and Applications, Next Generation Computation and Sustainable Infrastructure Systems. See:

<http://www.energystorage-cdt.ac.uk/> (Joint with the University of Sheffield)

<http://www.ngcm.soton.ac.uk/>

<http://www.cdt-sis.soton.ac.uk/>

From August 2018, the Faculty of Engineering and the Environment will become part of the Faculty of Engineering and Physical Sciences. TRG will be part of the School of Engineering and the Department of Civil, Maritime and Environmental Engineering. TRG will be returned in Unit of Assessment 12 (Engineering) in REF 2021.