



## CAPABILITY STATEMENT

### Transport Engineering Research, Faculty of Engineering



#### Overview

The University of Sydney is regarded as a global leader in the area transport engineering research.

We're proudly ranked 1st in Australia and 5th globally for transportation science and technology by the 2019 Academic Ranking of World Universities by Subject.

The strength of our research lies in its multidisciplinary approach; that is, the ability to scientifically tackle what are fundamentally socio-technical problems with a large and growing toolbox of methods and perspectives.

#### Key areas of interest

We cover a very wide range of activities related to research into transport engineering. Our key areas of interest are:

##### - System impacts of autonomous vehicles

The emergence of autonomous vehicles has wide-ranging impacts on the transport system. We're looking at performance dependencies in the transport system as these technologies reach saturation.

##### - Transport and land use interactions

Transport and land use systems are connected through the concept of accessibility: transport networks provide access to activities. We use econometrics, spatial analytics, and complex systems approaches to study this connection.

##### - Transport system performance measures

Increasing availability of data and a refocusing on the customer have led to new approaches to transport system performance measurement. We leverage new data sources and econometric approaches to benchmark status quo performance and model interventions.

##### - Traffic operations and control

Traffic operations are essential for managing congestion and supporting economic productivity. Building on control theory, traffic flow theory and empirical approaches, we contribute to theoretical and practical traffic operations.



## Our experts

- Professor **David Levinson**: His research bridges transport engineering, economics, planning, and geography. He is a leading expert in the impacts of technology on society, network evolution, quantifying access to opportunities, and road pricing.
- Dr **Emily Moylan**: Her research aims to understand the reliability and the variability of multimodal transport systems and measure their performance. Her skills exploit her expertise in big data analytics.
- Dr **Mohsen Ramezani**: His research models traffic flow dynamics and traffic control strategies to achieve holistic traffic congestion management systems. He also studies emerging transport technologies such as autonomous vehicles and ride-hailing and taxi.

## How to be involved as a partner

We invite government and business community to discuss challenges with us. For further information on consultancy services, research, or information on other opportunities, please contact:

Prof David Levinson, Professor of Transport Engineering, School of Civil Engineering, Email: [david.levinson@sydney.edu.au](mailto:david.levinson@sydney.edu.au)

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