



# SIMULATION FACILITIES

## FACT SHEET

### OVERVIEW

Monash University Accident Research Centre (MUARC) has a long history of undertaking cutting-edge projects using our unique range of driving simulators.

MUARC possesses full car, portable car, truck, motorbike, cycle and defence vehicle simulators. Our facilities include usability laboratories, a rest room and participant de-briefing areas. They are supported by our simulator technicians, human factors specialists and behavioural safety scientists.

Projects undertaken for global clients include infrastructure design, vehicle automation and evaluation of in-vehicle technologies.

### Mission Statement

To undertake world-class driving simulator projects in the areas of safety, human factors and driver behaviour. Applied research that addresses real-world needs and meets strict academic quality standards.

### Facilities

#### A full car simulator (Holden)

- Motion platform: up/down movements, pitch/roll
- 3D sound system
- Two faceLAB eye trackers
- Heart rate recorders, cameras and driver behavior monitors

#### Motorbike simulator

- A full motorbike. Developed in conjunction with Italian rider safety researchers.

#### Portable car simulator

#### Truck simulator with a full truck cab

#### Defence / crew vehicle simulator

For on-road trials, we have three instrumented vehicles and an instrumented motorbike.

These are supported by our ergonomics and behavioural safety expertise.

### Project Examples

#### Infrastructure Design:

- Signing and tunnel design
- Intersection design & traffic control
- Road design for cycle safety

#### In-Vehicle Technology

- Intelligent Speed Adaptation
- Efficacy of visual and auditory warnings

#### MUARC Driver Distraction work

Our unique protocol involves a driver maintaining speed and position on the road using standard vehicle controls.

Expected (e.g. traffic lights) & unexpected events (e.g. pedestrian stepping into roadway) occur as a means of assessing distraction.

#### Driver and Rider Training

Including older drivers, P-platers and hazard perception for riders.

#### Driver Fatigue Research

Including the development and testing of fatigue detection technology.

#### Further Information

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