2027 Summer Research Project

Drug Driving and Impairment: From Experimental Data to Six Research Papers

Three Summer Research Scholar positions requested

Supervisor: Dr Shamsi Shekari, Senior Research Fellow, School of Psychology

Program: 11 January–19 February 2027 | 25 hours per week | Hybrid, St Lucia

Focus: literature review, data entry/cleaning, analysis support and preparation of six manuscript workstreams

Section	Description
Project title	Drug Driving and Impairment: From Experimental Data to Six Research Papers
Hours & delivery	Three positions requested. 25 hours per week for 6 weeks (11 January–19 February 2027). Hybrid delivery, primarily through the UQ School of Psychology, St Lucia campus, with a combination of on-campus and remote work. Typical hours can be arranged flexibly across Monday–Friday, with scheduled weekly supervision and team meetings.
About the project (150–250 words)	Drug-driving remains a major road-safety challenge because roadside drug tests primarily identify whether a substance is present, rather than whether a driver is actually impaired. This Australian Government-funded project is developing and evaluating a two-tier enforcement approach that combines broader drug detection with a behavioural measure of driving impairment. The research includes controlled alcohol testing, prescription-medication, illicit-drug and control groups, a traffic-conflict perception test, driving-simulator performance, cognitive measures, sleep monitoring and stakeholder consultation. By January 2027, the project will have a large, unique dataset ready for publication-focused analysis. We are seeking three Summer Research Scholars who will work as a small publication team, with each scholar leading two linked manuscript workstreams (six manuscripts in total). Students will undertake targeted literature reviews, organise and clean de-identified datasets, check data quality, prepare data dictionaries and summary tables, assist with analysis, and draft manuscript sections under close supervision. The work will contribute directly to the project's publication program and to evidence on how alcohol, prescription medications and illicit drugs affect driving-related performance and how impairment could be assessed more fairly at the roadside.
What you'll do (100-150 words)	Each scholar will lead two linked manuscript workstreams. Scholar 1: (1) alcohol dose-response effects on traffic-conflict perception; (2) candidate impairment cut-offs and classification performance for the traffic-conflict perception test. Scholar 2: (3) prescription-medication effects on multidomain simulated driving performance; (4) illicit-drug effects on simulated driving, including drug-condition and drug-class patterns where sample size permits. Scholar 3: (5) whether traffic-conflict perception performance corresponds with simulator-defined impairment across control, medication and illicit-drug groups; (6) stakeholder perspectives on feasibility, acceptability, barriers and enablers of a two-tier drug-driving enforcement model. Across workstreams, students will conduct literature searches, data entry/checking, data cleaning, descriptive summaries and manuscript drafting.
What you'll learn (100–150 words)	Students will gain practical experience across the full research-to-publication pathway. This will include developing reproducible literature-search strategies, screening and synthesising evidence, building reference libraries, understanding experimental and observational road-safety designs, and translating research questions into analysis plans. They will learn how to work with de-identified behavioural, simulator and questionnaire datasets, including data

	entry, coding, consistency checks, missing-data review, variable documentation and preparation of analysis-ready files. With supervision, students will also contribute to descriptive and inferential analyses, preparation of publication-quality tables and figures, interpretation of findings, and scientific writing for peer-reviewed journals. The project provides experience in multidisciplinary research spanning psychology, road safety, alcohol and other drugs, public health, transport policy and quantitative methods, together with regular feedback on academic writing and research communication.
Project outcomes (75–125 words)	By the end of the six-week program, the three scholars will have contributed to six clearly defined manuscript workstreams. Expected outputs include six targeted literature-review packages and reference libraries, cleaned and documented analysis datasets for the relevant workstreams, data-quality logs and codebooks, preliminary descriptive tables/figures, and structured manuscript drafts containing the Introduction, Methods and planned/available Results sections. Where analyses are sufficiently mature, students will also contribute to interpretation and Discussion drafting. The aim is to leave each manuscript in an advanced state for completion and journal submission by the project team. Students who make substantial intellectual contributions may be considered for co-authorship in accordance with standard authorship criteria.
Who should apply? (75–125 words)	This project would suit motivated undergraduate or Honours-level students from psychology. Applicants should have strong attention to detail, good written communication and an interest in road safety, substance-related impairment or behavioural research. Experience with literature searching, Excel, reference-management software, data coding/cleaning or statistical analysis is desirable but not essential. Students should be comfortable working independently between supervision meetings while also collaborating as part of a three-scholar publication team. Because the project involves sensitive research topics and existing participant data, reliability, confidentiality and careful adherence to research procedures are important.
Team & supervision (75–125 words)	Primary supervision will be provided by Dr Shamsi Shekari, Senior Research Fellow in the UQ School of Psychology and lead researcher on the drug-driving enforcement project. Students will work within an established multidisciplinary research team that includes senior road-safety and alcohol-and-other-drug researchers, research assistants and University of Tasmania collaborators. Scholars will have a structured weekly individual supervision meeting, a joint publication-team meeting, and access to project staff for data and methods questions. Each scholar will have clearly allocated manuscripts while sharing literature-search, data-quality and peer-feedback practices across the team.
Additional opportunities (optional)	Students will work on research intended for peer-reviewed publication and will have opportunities to present their work to the project team. Substantial contributions may lead to co-authorship in accordance with authorship criteria. Students will also gain exposure to a large national road-safety research program, multidisciplinary collaborators, and the translation of experimental findings into policy-relevant evidence. Where mutually beneficial, there may be opportunities to remain involved in manuscript finalisation after the Summer Research Program.
Additional requirements (if applicable)	Students will work only with de-identified research data and will not participate in alcohol/drug administration or other high-risk participant procedures. Before data access, scholars must complete any required UQ research-integrity, confidentiality and data-management requirements and be added to relevant project/ethics documentation if required. Careful handling of sensitive participant information and secure use of UQ-approved storage systems are essential.
Contact	Yes, students may contact the supervisor before applying. Direct enquiries to: Dr Shamsi Shekari: s.shekarisoleimanloo@uq.edu.au

Proposed manuscript allocation (three Summer Research Scholars)

The titles below are working titles and can be refined after the final data freeze and targeted literature review. Each scholar will lead two workstreams with close supervision from the project team.

Scholar	Proposed manuscript	Primary focus/data	Summer scholar contribution
Scholar 1	1. Alcohol dose-response effects on traffic-conflict perception: a controlled within-participant study	Controlled alcohol sessions; traffic-conflict perception outcomes.	Targeted literature review; merge/check repeated-session data; clean outcome variables; descriptive tables; assist with repeated-measures analysis; draft Introduction and Methods.
Scholar 1	2. Developing candidate impairment cut-offs for traffic-conflict perception under alcohol	Alcohol data used to evaluate sensitivity, specificity and candidate impairment thresholds.	Review impairment-threshold and diagnostic-accuracy literature; prepare analysis dataset; verify outcome coding; assist with ROC/classification analyses; draft manuscript sections.
Scholar 2	3. Prescription medications and simulated driving: multidomain impairment profiles relative to controls	Prescription-medication and control groups; simulator domains including speed regulation, vehicle control and divided attention.	Review medication-specific driving literature; code medication classes; clean simulator and participant data; produce descriptive profiles; assist with group comparisons; draft manuscript.
Scholar 2	4. Illicit drugs and simulated driving: habitual-dose impairment and drug-class patterns	Illicit-drug group, including one- or two-session data where available; comparison with controls and/or within-person condition.	Review drug-class driving evidence; code/verify substance variables; clean repeated-session simulator data; document missingness; assist with analysis and manuscript preparation.
Scholar 3	5. Can traffic-conflict perception identify simulator-defined driving impairment?	Cross-measure validation across control, prescription-medication and illicit-drug groups.	Review impairment-screening and criterion-validity literature; link de-identified test and simulator datasets; create composite/criterion variables with supervisors; assess concordance/prediction; draft manuscript.
Scholar 3	6. Implementing a two-tier drug-driving enforcement model: stakeholder perspectives on feasibility and acceptability	Stakeholder focus groups/consultations on feasibility, sustainability, barriers, enablers, resourcing and monitoring.	Review implementation and enforcement literature; organise de-identified qualitative data; assist with coding framework and thematic analysis; prepare evidence tables; draft qualitative manuscript.