

UQ Summer or Winter Research Project Description

Please use this template to create a description of each research project, eligibility requirements, and expected deliverables. Project details can then be uploaded to the faculty, school, institute, or centre webpage prior to the launch of the program.

Project title:	Modelling and simulation of spatial dynamics in Australian petrol retail pricing.
hours of engagement & delivery mode	<i>20-36hrs per week hybrid (in person meetings, particularly initially – later we can proceed mostly by online meeting)</i>
Description:	It is well known that petrol prices in Australia follow a regular pattern by which prizes suddenly increase every couple of weeks (https://www.accc.gov.au/consumers/petrol-and-fuel/petrol-price-cycles-in-major-cities) followed by longer periods of slow decrease. In this project we would like to collect data and use mathematical modelling and parameter inference to identify the type of coordination between retailers which may drive the petrol price cycles.
Expected outcomes and deliverables:	<i>Scholars may gain skills in data collection, data analysis, Bayesian inference, mathematical modelling, simulation and visualisation.</i>
Suitable for:	<i>Due to the speculative and explorative nature of the project it is open to applications from curious and self-driven students with a background in quantitative sciences (Mathematics/Statistics, Physics, etc).</i>
Primary Supervisor:	Dietmar Oelz (SMP, d.oelz@uq.edu.au)
Further info:	Please contact me if you would like to apply for this project.