

2027 Summer Research Project

School of Psychology • Primary Supervisor: Dr Sam Armstrong

Section	Description
Project title	Rhythms of Readiness: Brain Stimulation and Movement Preparation
Hours & delivery	25–35 hours per week for 6 weeks (11 Jan – 19 Feb 2027). On campus, UQ St Lucia. Flexible hours and days, Mon–Fri. Two positions available.
About the project	Before we move, the human motor system is already preparing to act. This preparatory processing is shaped by our expectations, such as when we anticipate needing to respond and which response will be required. During this anticipatory period, brain activity rises and falls in a slow rhythm. Whether this activity actively aids or merely accompanies preparation is not yet known. This project builds on our recent work using transcranial alternating current stimulation (tACS), a safe, non-invasive technique that applies weak electrical currents to the scalp to modulate underlying brain activity. Scholars will help run experiments in which participants respond as quickly as possible to targets that vary in predictability. Depending on progress, the experiment may incorporate brain stimulation (tACS or TMS) and can be tailored to scholars' interests and the studies running in the lab.
What you'll do	• Help set up and pilot the computer-based tasks • Recruit, book and test adult participants • Assist with brain stimulation sessions (once trained), if included • Organise and screen data
What you'll learn	Scholars participating in this project will gain practical experience in cognitive/behavioural neuroscience research, including: • Conducting computer-based experiments with human participants • Learning how reaction time studies are designed and executed • Participant recruitment and laboratory testing • Learning basic approaches to analysing experimental results
Project outcomes	A clean dataset that feeds into the lab's ongoing research and a short summary of what the data show. The work may contribute to a conference presentation or publication.
Who should apply?	This project is suited to students with a background in psychology who are interested in cognitive neuroscience and experimental research. Preference will be given to students in their 3rd or 4th year, although exceptional 2nd-year students will also be considered.
Team & supervision	Dr Sam Armstrong
Additional opportunities	
Additional requirements	
Contact	Students are strongly encouraged to contact the supervisor before applying - samuel.armstrong@uq.edu.au