**2021 Summer Research Project Description**

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| **Project title:** | **Exploring the effects of ‘surprising’ sensory information on brain activity and behaviour.** |
| **Positions available:** | **Please insert number of position/s available:**  **2** |
| **Project duration and delivery** | Please outline the length of the project.     * *Please insert number of expected hours per week (minimum 20, max 36)*   28 hours per week   * *Please insert number of weeks (6-10)*   10 weeks   * *Please outline if the project can be completed under a remote working arrangement or if an on-site attendance is required*   On-site attendance is required for the project. |
| **Description:** | Please insert a project description to give applicants a comprehensive overview of the project.  The processing of a sensory event in the nervous system of many species – humans included - depends on how regular and predictable this event is. In fact, forming expectations about upcoming stimuli and comparing them to actual sensory input are thought to be defining principles of how we perceive the world.  In this project, we are interested in what happens in the brain when expectations are violated. More specifically, we would like know if and how ‘surprising’ stimuli impact concurrent sensory processing and learning in the brain. |
| **Expected outcomes and deliverables:** | Please highlight what applicants can expect to gain/learn from participating in the project, and what they will be expected to complete as a part of the project.  In this project, you will gain experience in human cognitive neuroscience research, using one or more of the following techniques: behavioural testing, electroencephalography (EEG) and transcranial magnetic stimulation (TMS). The emphasis will ideally be on data collection, with an introduction to experimental design principles. There is scope to explore different aspects of data analysis and interpretation. |
| **Suitable for:** | Please highlight any particular qualities that individual supervisors are looking for in applicants to assist with the selection process.  This project would suit students with a background in experimental psychology, neurophysiology or biomedical science. We are looking for someone who has good interpersonal skills and an eye for detail. Prior experience in running experiments with human participants is preferred. |
| **Primary Supervisor:** | This project is jointly supervised by Professor Jason Mattingley, Dr Claire Bradley and Dr Dragan Rangelov. |
| **Further info:** | If you would like applicants to contact your unit for further information, please provide the relevant contact details here. Please highlight if the supervisor wishes to be contacted by students prior to submitting an application.  Please indicate the UQ campus where the project takes place if not St Lucia  Should you have any questions, please contact Professor Jason Mattingley ([j.mattingley@uq.edu.au](mailto:j.mattingley@uq.edu.au)), Dr. Claire Bradley ([claire.bradley@uq.edu.au](mailto:claire.bradley@uq.edu.au)), or Dr Dragan Rangelov ([d.rangelov@uq.edu.au](mailto:d.rangelov@uq.edu.au)). |
| **Will you be collaborating with an external organisation on this project (for example NGO, government agency or private industry)?** | N/A. |