**2021-2022 Summer Winter Research Project Description**

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| **Project title:** | **Electrical brain response to ecologically valid social bonding.** |
| **Positions available:** | **2** |
| **Project duration and delivery** | Please outline the length of the project.     * *Number of Weeks: 10* * *Number of expected hours per week 20-30* * *On site attendance is required* |
| ***Description:*** | *Desire for shared understanding and companionship is a powerful driver of human behaviour and a very highly researched topic. This project aims to use Electroencephalography (EEG) to increase understanding of the neurocognitive processes involved in this area. Sprecher et al (2013) found that when two participants mutually asked and answered a series of questions designed to promote self-disclosure their ratings of perceived social closeness and friendship (regarding the other participant) increased.*  *We aim to investigate how these effects are reflected in Electroencephalographic activity. To control for familiarity as a confound we will use a between participant’s design. In one condition two participants will complete the series of questions designed to facilitate bonding and self-disclosure. In the other they will complete a simple cognitive task with another participant. Based on prior EEG research (Schiller, Koenig, & Heinrichs, 2019) we predict that neural microstates associated with external attention will be present more often and the average duration of microstates will increase for the social bonding condition. Furthermore, we expect differences in event related potentials (ERPs) which occur when participants are presented with the faces of their partner from the experiment. In particular, changes to the N2 and the Late Positive Potential (LPP) when comparing the social bonding and non-social bonding conditions.* |
| **Expected outcomes and deliverables:** | S*tudents will gain experience in setting up electrophysiological experimentation and carrying out data recordings. They will be asked to produce an oral presentation at the end of their project.* |
| **Suitable for:** | T*his project is open to applications from students interested in physiological psychology and cognitive neuroscience. Students who have completed their BSc would benefit most from the position.* |
| **Primary Supervisor:** | Alan Pegna |
| **Further info:** | Please contact [a.pegna@uq.edu.au](mailto:a.pegna@uq.edu.au) for further information. |
| **Will you be collaborating with an external organisation on this project (for example NGO, government agency or private industry)?** | No |