Researchers from the School of Psychological Sciences are offering a range of clinical research projects in 2020 that may be suitable for either PhD (Clinical Psychology) or PhD (Clinical Neuropsychology) (unless otherwise specified). Particular projects or areas of research for candidates applying for the program commencing 2020 are listed below.

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Project Area</th>
</tr>
</thead>
</table>
| Dr Lucy Albertella  | 1. Synbiotic-enhanced cognitive training for young people at risk of developing impulsive-compulsive disorders  
2. Synbiotic-enhanced exposure therapy for young people with contamination-based OCD  
3. Cognitive correlates of risk and resilience: Does cognition mediate the influence of early life factors on impulsive-compulsive behaviours in young adulthood? |
| A/Prof Clare Anderson| Title: Characteristics of driving impairment in older adults at risk of dementia  
Description: This program of work will examine changes in driving outcomes in older adults at risk of dementia, compared to healthy older adults. It will utilise a variety of methodological approaches including questionnaire-based assessment, neuropsychological assessment, ocular metrics, brain activity and on-road driving outcomes. We seek to (a) predict those at risk of poor driving outcomes, and (b) understand the potential contribution of sleep disruption and cognitive impairment to poor driving outcomes in these at-risk groups. |
| Prof Peter Anderson | Long-term consequences of being born very early or very small.                                                                                                                                               |
| Dr Bei Bei          | Projects broadly related to sleep and mental health, and improving sleep and wellbeing through cognitive-behavioural interventions. For example,  
(1) The psychological and behavioural regulations of sleep.  
(2) The relationship between sleep and mental health (e.g., mood, anxiety, and other psychiatric symptoms/disorders).  
(3) Cognitive behavioural therapy for insomnia. |
| Prof Sean P. A. Drummond | My students are heavily involved in shaping their own projects. Generally, we start with some of the ongoing work in the lab, and the student has the opportunity to develop their interests, building from the foundation of those projects. This could involve utilising already collected data, ongoing data collection, and/or new data collection. |
Given current activities in the lab, the areas in which it would make most sense for a student to work include: 1) insomnia; 2) interaction of sleep with PTSD and anxiety disorders (this includes both mechanism studies and possibly small clinical studies); and/or 3) impact of sleep loss and circadian disruption on decision making. I am open to other ideas outside these areas, assuming we can develop manageable theses around them.

| Prof Leonardo Franklin da Costa Fontenelle | 1) "Transdiagnostic predictors of response of obsessive-compulsive disorder (OCD) and gambling disorder (GB) to exposure therapy delivered through virtual reality": As appropriate assessment of response to exposure therapy may need to wait several weeks, the identification of predictors of therapeutic response is important to save time, decrease patients’ distress and redirect treatment to other therapeutic approaches that are potentially more useful. Thus, in this study, the Clinical PhD student will attempt to identify common (transdiagnostic) predictors of response to exposure therapy across different "compulsive" disorders.  
2) "A study on the use of virtual reality to identify endophenotypes in obsessive-compulsive disorder (OCD)": In this project, the Clinical PhD candidate would use virtual reality to expose individuals with OCD, their first degree family members and healthy control subjects to environments thought to be relevant for OCD symptoms, to identify phenomenological and psychophysiological features thought to be overrepresented in populations at risk for OCD.  
3) "Addressing the relationship between sleep disorders and obsessive-compulsive and related disorders (OCRDs)": In this project, the Clinical PhD candidate's objective would be to investigate prevalence and correlates of OCRDs in individuals with sleep disorders clinic and the prevalence and correlates of sleep disorders in individuals attending an OCRDs clinic. A systematic review and potential meta-analysis on the topic is also a possibility. The findings of these studies would allow a more detailed understanding of these conditions and with a view to develop specific interventions.  
Clin Psych preferred |
| Prof Nellie Georgiou-Karistianis | The projects I have in mind are looking at cognitive training and neurofeedback in improving functional outcomes in patients with Huntington’s disease. I am interested to find one or two students to commence under my supervision in 2020.  
Clin Neuro preferred |
| Dr Kate Gould & Prof Jennie Ponsford | Understanding, preventing and treating cybercrime after acquired brain injury (ABI)  
Individuals with Acquired Brain Injury (ABI) are potentially highly vulnerable to cybercrime (e.g. online romance scams) due to social isolation, strong desire for friendships and romantic relationships, and cognitive difficulties that may prevent detection of suspicious messages. We are offering a Clinical PhD project to contribute to the further research that is required to:  
- Develop a cyberscam screening tool for people with ABI  
- Examine the frequency of self-reported cyberscams in individuals with ABI  
- Understand the perspective of individuals with ABI regarding cyberscams  
- Develop and evaluate evidence-based prevention and recovery interventions for people with ABI |
| Dr Melinda Jackson | The interaction between memory impairment and depression in patients with obstructive sleep apnoea |
| Dr Sharna Jamadar | 1. Simultaneous MRI-PET imaging of cognitive reserve in ageing  
2. Neuroscience of parenthood  
3. Phantom Kicks in the post-partum period: phenomenology  
4. Mapping the female homunculus before, during and after pregnancy  
5. Proprioception during and after pregnancy  
6. Understanding cognitive reserve in ageing and early neurodegenerative disease |
|---------------------|--------------------------------------------------------------------------------|
| Dr Laura Jobson     | Cultural influences on the processes involved in PTSD  
*Clin Psych preferred* |
| Dr Beth Johnson & Prof Mark Bellgrove | The Monash Autism/ADHD Genetics and Neurodevelopment (MAGNET) Project is focused on uncovering developmental and genetic biomarkers to improve diagnostic accuracy and reduce time to diagnosis. We are richly phenotyping all families coming through the study for ASD and ADHD-like traits using a range of standardised clinical and experimental neurocognitive tools. Two examples of projects arising from this cohort include distinguishing ADHD-specific behaviours during routine autism assessment, and separating autistic behaviours within children who have intellectual disabilities. |
| Dr Hannah Kirk      | 1. Alfi VR: Evaluating the efficacy of a Virtual Reality program designed to train inhibitory control in adolescents with ADHD.  
2. Tali Train: Evaluating the efficacy of a gamified touchscreen app designed to train attentional processes in children with ADHD and ASD.  
3. Development and evaluation of a gamified touchscreen app designed to train executive functioning in developmentally vulnerable children living in remote and rural communities. |
| Dr Rico Lee         | Title: App-based technologies to personalise treatments for addictions and OCD.  
Blurb: We have developed an app-based assessment tool in collaboration with Torus Games to measure the key drivers of addictions and OCD in an engaging and accessible way. This assessment app is currently being validated by clinical partners (ie. Turning Point inpatient alcohol and methamphetamine detoxification clinics) and is a key platform at BrainPark, a world-first purpose-built facility for lifestyle (eg, exercise, meditation) and technology-based (eg, brain training, virtual reality) interventions for addictive and compulsive disorders. There is diverse scope in developing a PhD project (clinical or clinical neuropsychology) looking at affective/trait-based and neurocognitive assessment of addictions and OCD, identifying predictors of treatment response to lifestyle and technology-based interventions in order to personalise treatments, as well as to develop and conduct cognitive training approaches using app-based technology. |
| Prof Shantha Rajaratnam, Dr Bei Bei and Dr Julia Stone | The Circadian Light in Adolescence, Sleep and School (CLASS) project is a longitudinal study examining relationships between sleep, circadian timing and light on cognitive function, academic performance and mood in adolescents. The study has a mixed-methods design, and includes clinical interviews and neuropsychological assessments. Recruitment will be commencing late 2019. |
| Dr Rebecca Segrave  | Projects investigating one or both of the following two areas can be developed: i) the efficacy of behavioural interventions (e.g. physical exercise, mindfulness meditation, combined mental and physical training, lifestyle modification) to reduce compulsive psychopathology and improve associated aspects of brain... |
and cognitive health, and ii) development of theory-based behaviour change strategies that encourage the implementation of behavioural interventions into the practice of clinicians and the routine lifestyle of community members.

Dr Megan Spencer-Smith

Opportunities for PhD projects on the topic of computerised cognitive training in primary school children that would be nested within larger collaborative projects, including: (1) Understanding the principles of cognitive training in children by conducting a series of randomised controlled trials of working memory training to systematically test common (untested) assumptions of what makes cognitive training work. This project is a collaboration with colleagues at the Turner Institute (Prof Peter Anderson) and Cambridge University (Prof Sue Gathercole); and (2) Developing and designing a digital training program to build resilience and prevent mental health problems in primary school children by collaborating with key stakeholders and conducting a trial of the program. This project is a collaboration with colleagues at the Turner Institute (Prof Antonio Verdejo-Garcia, A/Prof Adrian Carter).

Dr Rene Stolwyk

Title: Investigating access to and efficacy of interventions to treat depression in survivors of stroke
Summary: Depression is recognised as one of the the most common long-term unmet needs of stroke survivors. In this project we will first use national linked data sets to understand level and predictors of access to treatments for post-stroke depression. Secondly, we will investigate the feasibility and efficacy of a novel psychological intervention to treat depression in stroke survivors with aphasia.

Prof Julie Stout

For a clinical psychology student I would be interested in supervising a project on family functioning in Huntington's disease, with a specific focus on addressing the impact of an unwell parent on their children, and how we might intervene to reduce the negative impacts on kids. I have a new collaboration starting on this topic which is opening new opportunities.

Clin Psych preferred

Prof Antonio Verdejo-Garcia

Project 1: This project will examine the potential benefits of Episodic Future Thinking (EFT: a cognitive intervention for impulsivity, based on simulation of events that may occur in one’s future) in addiction and eating disorders. It will also explore how EFT effects can be improved through immersive technologies (e.g. virtual and augmented reality) and pharmacological cognitive enhancers.

Project 2: This project will examine how state-related fluctuations in homeostatic status (e.g. hunger, craving) and stress modulate decision-making in addiction and eating disorders, using a combination of cognitive measures, fMRI and transcranial magnetic stimulation.

Prof Antonio Verdejo-Garcia & Prof Mark Bellgrove

Title: Online assessment of impulsivity in adults with substance use disorders and comorbid attention deficit hyperactivity disorder (ADHD).
Summary: This project will utilise a recently developed online tool that has been developed by our team for assessing impulsivity. It will be applied here to understand relationships between cognitive aspects of impulsivity and real-world instances of impulsivity across the spectrum of substance use disorders and ADHD. The project will likely involve significant international collaboration and a "big data" approach with data been collected across multiple sites.

Clin Neuro preferred

Dr Joshua Wiley

(1) extending an existing cognitive behavior therapy for insomnia intervention in cancer, (2) testing on a brief, remotely delivered emotion regulation
| Associate Professor Marie Yap | We conduct research in parenting and child and youth mental health, branching across prevention (with community-based samples) into treatment/maintenance (with clinical samples) in mental disorders. I have 2 definite PhD projects commencing 2020 (see Supervisor Connect; one comes with a top-up scholarship), but am happy to discuss other projects that fit broadly within parenting and child/youth mental health. |

**Check out** [Supervisor Connect](#) and the [School of Psychological Sciences](#) website **for more information about our researchers and their areas of interest**