

School of Psychology and Neuroscience

PhD project topics for 2025 entry

Cellular and behavioural neuroscience

James Ainge	Network analysis of entorhinal-hippocampal circuits for spatial and episodic memory using in vivo electrophysiology, genetic tools and behavioural analysis of rodent behaviour.
Eric Bowman	Investigating how animals and people adapt behaviour to gain reward.
Gayle Doherty	Neuronal survival in development and neurodegenerative disorders - how and why do neurons die (and how can we protect them in disease).
Wenchang Li	We study how a simple vertebrate processes sensory inputs and generates different motor behaviours.
Gareth Miles	Investigating neural circuits of the brainstem and spinal cord that control rhythmic movements, such as breathing and walking, and deciphering the mechanisms that underlie motor circuit dysfunction in Motor Neuron Disease (MND).
Stefan Pulver	Environmental Neuroecology: How does the natural world shape the minds and behaviours of animals, and vice versa?
Karen Spencer	Our research focusses on how developmental conditions can influence phenotypes across the lifespan, looking at brain, physiology and behaviour along the way. Our group has very diverse interests based in fundamental mechanisms, ecology and animal welfare.
Maarten Zwart	We investigate how the brain produces behaviour by looking at how movements are generated and adjusted to meet animals' needs.

Origins of mind

Gillian Brown	Sex/gender differences in human behaviour and cognition (e.g., empathy, mate preferences); cross-cultural variability in human behaviour and national levels of gender equality; evolutionary perspectives on human behaviour.
Cat Hobaiter	Questions that explore the evolutionary origins of language; questions on the cognition and communication of wild apes; questions on rhythm and synchronisation in human and other animals' social behaviour.
Erin Robins	Empirical work on how children & adults across culture experience and represent concepts like magnitude, uncertainty and novelty; collective cognition; community-led research; research on decolonial and diversification practices.
Manon Schweinfurth	Investigating the evolutionary and psychological origins of cooperation - why (and how) do individuals help others instead of being selfish? Join us to study those questions in rats and primates.

Origins of mind (cont'd)

- [Amanda Seed](#) Experimental psychology research with human or non-human primates, examining aspects of cognition implicated in the evolution of mind, such as causal reasoning, abstract representation, and cognitive control.

Perception, cognition and action

- [Daniela Balslev](#) My research focuses on sensorimotor processes that are at the foundation of higher-order cognition in humans. How do we pay attention? What happens in spatial neglect, a disorder in which the patients are strikingly unaware of stimuli that appear to their left? We use cognitive neuroscientific methods (transcranial magnetic stimulation, functional magnetic resonance imaging, neuropsychology) to answer such questions.
- [Lizzie Bradford](#) Research exploring human interactions (communication, social cognition, perspective taking), and the cognitive mechanisms underlying interpersonal functioning. Projects span different methods, including EEG and eye-tracking, as well as different populations, including developmental perspectives, clinical perspectives (particularly autism spectrum disorders and ADHD), and cross-cultural perspectives. Please see my website for further project examples.
- [David Donaldson](#) How do we remember? Investigate episodic memory using behavioural and neuroimaging, focused on examining the quantity and quality of remembering in humans, with the aim of identifying the dissociating the cognitive processes that support successful remembering.
- [Julie Harris](#) The perception and cognition of natural patterns and camouflage: how shape, size and pattern affect how quickly and effectively we perceive, attend to, and remember objects.
- [Ines Jentzsch](#) Cognitive mechanisms that underly our ability (or inability) to plan and control highly skilled performances under pressure. Any other topics in the area of Music Cognition are also welcome.
- [Thomas Otto](#) Multisensory perception: A computational modelling approach to study the cognitive architectures that underlie combined decisions about vision, audition, and touch.

Social and group processes

- [Yasemin Acar](#) Social identity and social class, collective action and empowerment, crowd behaviour, qualitative methodologies.
- [Barbara Dritschel](#) The relationship between emotional flexibility, autobiographical memory flexibility and mindfulness in depression, post-traumatic stress disorder, eating disorders (see my website for other topics).
- [Maggie Ellis](#) Facilitating human connection in the advanced dementia care triad: Exploring the impact of non-verbal communication education, training and practice on the psychological wellbeing of individuals living with advanced dementia, their family members and professional caregivers.

Social and group processes (cont'd)

- Bobby May** Experimental (lab-based) studies on interpersonal aggression; qualitative studies on perceptions of aggressive behaviour.
- Sam Pehrson** Understanding the role of Buddhism in politics: How do religious identities shape political convictions and actions in different cultures and contexts? Exact focus can be tailored to students' interests, language skills, etc.
- Anna Stefaniak** Intergroup relations, social identity, collective nostalgia (in the context of politics, but also in the context of gender relations), inter-minority relations, intergroup contact and other intergroup interventions; social identity approach to health (e.g., recovery from addiction).
- Nicole Tausch** Understanding factors that promote Collective action (in particular climate protests); the role of state repression in (de-)mobilizing collective action; psychological aspects of political polarization; experimental and survey methodologies.

This is not an exhaustive list of projects or staff. Please feel free to discuss your own ideas for a research project with potential supervisors.