

**POSTGRADUATE** 



University of Otago

# Postgraduate study in Psychology



#### We ...

- have ranked in the top 50 Psychology departments internationally three years in a row
- are the highest ranked department in the University of Otago
- are a highly inclusive department that takes immense pride in our students.

### We give you ...

- first-rate research opportunities with a diverse and interesting range of projects to choose from
- exceptional teaching and supervision by world renowned researchers
- exceptional technical and administrative support.







# What our current postgraduate students are researching in the labs...



#### ABRAHAM LAB: NEURAL MECHANISMS OF MEMORY

Prof Cliff Abraham's research focuses on the rules and mechanisms governing synaptic plasticity, metaplasticity, and memory formation in the brain, with a particular focus on cellular and molecular events in the hippocampus. In their research, the lab uses electrophysiological, behavioural, and immunofluorescent microscopy approaches to studying the mechanisms mediating the induction and persistence of synaptic plasticity in vivo and in vitro, and their relevance to memory.

Research extends to clinical research areas such as Alzheimer's disease, schizophrenia, neurogenesis, and neuroprotection, using animal models. A major current research interest is in biomarkers and therapeutic molecules for Alzheimer's disease.

#### ALSOP LAB: EXPERIMENTAL ANALYSIS OF BEHAVIOUR

Most environments confront humans and other animals with choices. These can range from a major corporation making financial decisions, to ducks foraging for food on a lake. Dr Alsop's research examines the way the distribution of resources in an environment determines humans' and animals' choices. The lab has three very different lines of research at the moment:

 looking at the role of punishment and reward in sensation seeking and how they influence behaviour in humans

- looking at how pigeons make choices where there are more than two options available
- using a signal-detection task to investigate differences in reward sensitivity with children with ADHD and children without ADHD

They're also using a second task to look at possible differences in sensitivity to negative outcomes between the same groups.

#### **BILKEY LAB: BRAIN AND BEHAVIOUR**

Prof David Bilkey's general research area is systems neuroscience, with a particular focus on the role of the temporal cortex regions of the brain in memory and learning processes. Specifically, investigating how the brain encodes an episodic memory and how it uses this information in decision-making.

Research in the lab focuses on the hippocampal area of the brain which seems to code 'where' information and has a role in spatial navigation. The group explores its links to regions such as prefrontal cortex, which appears to modulate hippocampal activity and has a role in integrating memorial information with prior experience and motivation. We investigate these questions using a variety of behavioural and electrophysiological techniques, particularly single unit recording.

In a parallel research pathway we also investigate how the function of the hippocampus is altered in schizophrenia using an animal model of the disorder.



COLOMBO LAB: NEURAL BASIS OF COGNITION

The focus of Prof Mike Colombo's research is the neural basis of learning and memory and comparative animal cognition. The lab currently supports four lines of research:

- conducting single-unit electrophysiology studies and examining the neural basis of learning, memory, gambling, reward mechanisms and recently the neural basis of magnetic based navigation
- examining the effects of hippocampal lesions on learning and memory
- exploring the cognitive abilities of birds, focusing on serial-order expertise, numerical competence, concept formation as well as basic mechanisms of learning and memory
- the effects of nootropics (cognitive enhancing drugs) on learning and memory.



#### **CONNER LAB: DAILY EXPERIENCES**

We are interested in the psychological, cognitive, and genetic factors influencing our emotional and physical wellbeing. We use technology computers and mobile phones - to track people's daily experiences close-to-real time, in their natural environment.

At present, we are running the 4-year micro-longitudinal Daily Life Study on the daily experiences of University of Otago students. This study is leading to many exciting interdisciplinary projects investigating the interplay between genes, nutritional factors, and wellbeing. Lab projects include:

- social psychology interests in positive psychology and hedonic experience, such as the consequences of repeatedly introspecting on and verbalising our emotional states
- health psychology, investigating health behaviours such as alcohol and drug use.

#### FRANZ LAB: ACTION, BRAIN & COGNITION

- How and why do we perform a particular action at a specific time?
- Why not do something else?
- What are the influences on that choice of action?
- Did we consciously choose?

Prof Liz Franz's Action, Brain & Cognition lab and fMRIotago investigates all of these questions using a variety of techniques, including brain imaging (fMRI, DTI, MRI, EEG), kinematic analysis, behavioural variables, TMS, and gesture analysis. Our primary tool to investigate these issues is bimanual actions. That is, we view bimanual actions as a window into the workings of the brain. In addition, we investigate an action selection model, according to which the basal ganglia (and frontal-striatal circuitry) play a critical role in what actions get selected and what actions get inhibited.

Our lab investigates neurological patient populations including people with Parkinson's disease, essential tremor, stroke, Autism Spectrum Disorder, congenital disorders (eg, mirror movements), and other conditions that affect the action system.



#### HALBERSTADT LAB: SOCIAL COGNITION

Prof Jamin Halberstadt studies the cognitive processes underlying some of the most important – and sometimes bizarre – social phenomena, including social categorisation, emotion, religion, ritual, face perception and attractiveness to name a few. Some current projects include:

- Exploring the connection between religiosity and fear of death, and evaluating factors that may explain or influence this connection
- The effects of prayer on performance and persistence
- · Adult theory of mind
- Cognitive fluency (ease of perceiving and understanding) in judgments of liking and honesty
- Using behavioural tracing to test theories of group formation and change.



**HAYNE LAB:** EARLY LEARNING PROJECT

Do you remember your first day of school? The first time you drove a car? What about where you left your keys when you came home from the supermarket or what classes you need to attend tomorrow? These kinds of memory tasks are universally familiar to adults; to function effectively in the world, we frequently reflect on events that have happened in the past and plan for events that we know will happen in the future.

We accomplish this kind of mental time travel using a special kind of memory that is commonly referred to as Episodic Memory. Although there is little debate among memory researchers about the cognitive value of episodic memory, there is heated debate about when episodic memory might emerge during the course of human development. At what age do children first show signs of episodic memory skill and how do these skills change as a function of age and experience? When do children begin to use what they have learned in the past to make predictions about similar events in the future?

Research in our lab examines age-related changes in episodic memory during childhood and adolescence. We test participants of different ages using a series of experimental procedures that have been developed in our lab (and in others) to measure verbal and nonverbal episodic memory. Our findings have important theoretical implications for current views of memory development and childhood practical and important implications in settings in which children must rely on their memories, including clinical, legal, and educational contexts.



#### **HEALEY LAB:** ADHD RESEARCH PROGRAMME

Dr Dione Healey's ADHD lab is interested in all things inattentive and hyperactive. Currently, Dr Healey's main project is an HRC funded intervention study where she is comparing an intervention that she has developed, called ENGAGE (Enhancing Neurobehavioural Gains with the Aid of Games and Exercise), which uses games to teach self-control skills, to reduce the disruptive behaviours of preschool children exhibiting high levels of hyperactivity/impulsivity; to a well known parent behavioural management programme, called *Triple P* (Positive Parenting Programme).

Students are also using physiological measures such as heart rate variability and pupillometry in their research on children with ADHD to help better understand how they relate their emotions and attentional focus.

Individually, they are investigating:

- how social functioning may be impacted by difficulties with emotion recognition and emotional reactions
- attentional fluctuations from executive functioning deficits
- the predictors of impairment and symptom severity in children with ADHD, such as parenting style and temperament; using qualitative methods to look at parents' experiences of having a child with ADHD
- the relationship between classroom attentional behaviour and academic achievement.

#### **HUNTER LAB**

Dr Jackie Hunter's lab focuses on social identity, self-esteem, and intergroup discrimination. More specifically, the group investigates the question of whether discrimination and prejudice between members of different groups is in part motivated by attempts to achieve and maintain positive self esteem. Different areas of research in our lab investigates:

- to what extent different forms of intergroup discrimination are affected by different types of self-esteem
- how threats to self-esteem affect patterns of discrimination
- howotherfactors such as belongingness, meaning, anxiety, and perceptions of control are related to various forms of intergroup discrimination.



#### LINSCOTT LAB

In Dr Richard Linscott's lab, many hands have been working on a large project assessing performance on numerous indicators that are related to personality differences. We are testing things like:

- eye tracking performance
- motor coordination
- reaction time
- attention
- speech perception
- reward sensitivity, as well as other behaviours and experiences.

The results of the project will be able to tell us about the relationships between ethnicity, alcohol and cannabis use, motor performance, speech perception, and personality differences. Two new studies are extending the project to further investigate these relationships.



MACHADO LAB: NEUROPSYCHOLOGY & COGNITIVE PSYCHOLOGY

Dr Liana Machado's lab conducts research in the areas of neuropsychology and cognitive psychology. The majority of the ongoing projects are investigating the mechanisms and machinery underlying cognitive functions in healthy brains, cognitive deficits that emerge as a result of brain disease and healthy aging, and methods by which these deficits can be minimised via simple accessible means. Research tools currently being utilised include transcranial direct current stimulation, near infrared spectroscopy, transcranial Doppler ultrasound, and eye tracking.

Research questions currently under investigation relate to:

- benefits of electrical brain stimulation and habitual physical activity for executive functions
- influences of cerebrovascular factors and prescription drugs on cognitive performance
- as part of a community project, methods by which the attention of motorists might be attracted by cyclists to reduce risk.

### MCNAUGHTON LAB: NEUROPSYCHOLOGY OF ANXIETY

Research in Prof Neil McNaughton's lab combines the psychological analysis of emotion and memory with physiological analysis of rhythmical electrical activity called 'theta' in both rats and humans. Anxiolytic drugs are used to link the psychological and physiological levels of analysis and to generalise from laboratory

experiments to clinical situations. In rats, these drugs impair theta and therefore the function of the temporal lobe – which is thought to be crucial for some types of memory.

Currently, at the neural level, we are investigating the pharmacology and neural control of hippocampal theta activity and its relation to theta recorded from frontal cortex. This includes the use of a 'brain bypass' and other techniques to restore function after neural damage. At the psychological level, we are analysing the human EEG for specific neural signatures of goal conflict and linking this to personality measures and the neuroeconomic theory.

# MILLER LAB: COGNITIVE PSYCHOLOGY AND PSYCHOPHYSIOLOGY

Studies in this lab investigate human perception, attention, speeded decision-making, and motor control, with an emphasis on contributing to the development of quantitative statistical models. We use behavioural measures such as reaction time and response accuracy, and these are often augmented with psychophysiological measures such as EEG in order to get more specific windows on perceptual or motor processes.

Several recent projects have focused on attentional processes. For example, we have investigated the decrements in performance that arise when people try to do two tasks at once, using both the traditional "psychological refractory period" paradigm and a new "prioritized processing" paradigm recently invented in this lab. Other attention-related projects have investigated the distracting effects of information that people are trying to ignore, and also the benefits in performance that arise when people get two redundant cues telling them to perform the same action. In all cases, the goal is to learn about the underlying brain mechanisms giving rise to the observable effects of attention on performance.

In addition to the studies of attention, other recent projects have investigated (1) the brain processes underlying spontaneous voluntary decision making (a line of research that some neuroscientists believe will give us clues about the nature of free will); and (2) the involvement of the motor system in understanding language describing actions (e.g., is the motor area controlling the foot involved in understanding the spoken word "kick"). Finally, we aim to contribute to the ongoing discussion within our field about the advantages and drawbacks of both traditional and newly-proposed statistical methods.



**MURRAY LAB: FACE RESEARCH** 

The Face Research lab, led by Dr Janice Murray looks at how young and older (>60 years) adults recognise emotions from faces. Emotion recognition is generally thought to decline over the lifespan, with older adults showing worse performance than young adults when labelling the emotions of anger, fear, and sadness. However, we have found that not all is lost in ageing. Older adults have difficulty directly labelling emotions, but perform as well as young adults in tasks assessing indirect emotional knowledge.

We want to know what other emotional abilities remain intact with ageing. There may also be better ways to assess emotion knowledge than asking participants to label faces, such as using force as an indirect measure. We are also interested in why these changes are occurring in ageing.

One possibility is a decline in neuropeptides, because administration of oxytocin improves emotion recognition for older males. We are working toward an understanding of how emotion recognition changes with ageing and the mechanisms behind these changes.

#### O'HARE LAB: COGNITIVE ENGINEERING & HUMAN DECISION MAKING

The Cognitive Engineering and Human Decision Making lab, under the supervision of Associate Prof David O'Hare is currently investigating:

- implicit learning of categorisation decisions as a basis for understanding how best to train sports officials
- risky decision making in financial settings
- supporting medical practitioners' assessment and diagnosis of patients with Autism-Spectrum Disorders
- the development of a powered wheelchair simulator.

We are also conducting studies in our flight simulator of pilot decision making and investigating approaches to reducing flight anxiety in non-pilots.

We are involved with Australian government funded research on power system operators' expertise and skill acquisition in conjunction with Macquarie University in Sydney. Previous graduates have gone on to jobs in industry (eg, Airbus, Queensland Rail, Helicopters NZ, RNZAF, etc.) and academia.



#### **POULTON LAB:** DUNEDIN LONGITUDINAL STUDY

Prof Richie Poulton is Director of the Dunedin Multidisciplinary Health and Development Research Unit which conducts the Dunedin longitudinal study, one of the most detailed studies of human health and development ever undertaken. A multidisciplinary, longitudinal study of 1,037 babies born in Dunedin during 1972/73, the Study members have been followed up since birth, at age three, then every two years to age 15, then at ages 18, 21, 26, 32 and 38 (2010-2012). For each follow-up phase, the Study members are brought to the Dunedin Unit where they undergo numerous assessments and measures of their health and development, including a broad range of studies in the psychosocial, behavioural medicine and biomedical research areas. The age 38 assessment phase was an outstanding success with 95% of the surviving Study members being assessed. It is planned to next see the Study members at age 45. The Study is now in its fifth decade and has produced over 1200 publications and reports, many of which have influenced or helped inform policy makers in New Zealand and overseas.

Prof Poulton's research interests include Developmental psychopathology; Geneenvironment prediction of complex disorders; and Psychosocial determinants of chronic physical disease. He also has a strong interest in promoting the uptake of evidence for policy and practice.



REESE LAB: AUTOBIOGRAPHICAL MEMORY & LITERACY DEVELOPMENT

Research in Prof Elaine Reese's lab focuses on how children develop autobiographical memory, language, and literacy. The way that parents talk to their children influences the child's development.

Research in the lab has found that:

- the quantity and quality of the stories that parents tell their children makes a difference in development
- open ended questions allow children to put experiences in their own words; helping with language development and memory development
- talking about more emotional aspects of stories creates a more positive self in children and this helps them understand their emotions and past experiences.

Recent research is focusing on the outcomes of early conversations using longitudinal studies. Children who were told elaborative stories as children have earlier memories and stronger self-concepts in adolescence. These effects are also being investigated in other cultures.



**RUFFMAN LAB:** DEVELOPMENT ACROSS THE LIFESPAN

Prof Ted Ruffman's lab investigates social understanding (theory of mind) in infants, children, young and older adults, and in domestic dogs. We examine emotion recognition, faux pas recognition, verbosity, and lie detection. Examples of the current research are:

- examining how mothers help children to learn about the social world
- examining empathy in infancy and young children
- examining empathy in older adults.

#### SCARF LAB: ANIMAL, BEHAVIOUR, COGNITION & DEVELOPMENT

Dr Damian Scarf's lab has two main focuses; developmental psychology and comparative animal cognition.

The lab's developmental work focuses on mental time travel in young children and children's ability to delay gratification. Very little is known about how children reflect on a past event and how they are able to use the memory to plan for upcoming events. The lab is using nonverbal tests to investigate this. How well children can delay gratification when they are young has been linked to many factors in later life. Research has been focused on helping children to delay gratification and seeing if this relates to other abilities, eg, executive function, mental time travel, and inhibition.

The lab's work with animals focuses on identifying brain areas involved when pigeons learn a list of items. Future work will investigate the cognitive abilities of parrots and tracking of homing pigeons.



#### SHAUGHENCY LAB: APPLIED DEVELOPMENTAL SCIENCE LAB

Dr Elizabeth Schaughency's lab has students involved with studies of developmental change and factors (social, health) that influence development. Different research programmes include:

Growing readers in beginning primary school The Getting Ready for School Team, investigating family and community support for young children's learning and development and

The Paediatric Sleep Research Group, a multidisciplinary research group examining the links between children's sleep and their daytime functioning. Current, students are studying children's problems breathing during sleep (sleep disordered breathing) and learning and behavioural development.



TAUMOEPEAU LAB: LANGUAGE AND SOCIAL DEVELOPMENT

Some of the questions we ask in Dr Mele Taumoepeau's lab are:

- What toddlers know about the minds of others?
- How children learn language?
- How parent-child interactions influence children's cognitive and social development?
- How culture influences the way children and teenagers develop?

We're broadly interested in how children learn language and how language helps them understand their social world. It's hard to find the answers to these questions because infants and toddlers can't tell you! Some of the techniques we use include following children and their caregivers around for years observing how children develop in a social context. We also use implicit methods that involve coding infants' eye gaze to gain insights into the process involved in learning language. More recently, we've started working with the Pacific Trust Otago to understand better how social and cultural factors support the health and wellbeing of Pacific teenagers.



TREHARNE LAB: HEALTH
PSYCHOLOGY RESEARCH TEAM

Health Psychology is a recent addition to the specialities within psychology. This speciality involves research into physical health, illnesses, and healthcare from a psychological perspective.

Research projects in Dr Gareth Treharne's lab, include:

- how having a hand injury impacts on people's lives leading to a sense of blame and changes to identity
- how farmers reduce their risk of quad bike accidents and how they cope if they have had an accident
- how people with cancer cope with their diagnosis and treatments, and how psychologists can support them
- how people with arthritis can be encouraged to be more physically active by removing barriers to regular walking
- how men with arthritis handle the impact of reduced physical activity on their masculinity
- what forms of exercise people with arthritis enjoy doing and how this compares to before they had arthritis
- daily experiences of fatigue among people with arthritis and how this impacts on their mood
- how people with arthritis can be supported in quitting smoking
- the impact of having a brain injury or the neurological condition prosopagnosia that makes it hard to recognise faces

- how parents of a child with attention deficit/hyperactivity disorder support their child in achieving in life
- Māori pre teen children's view of Hauora as a holistic concept of health related to behaviours like exercising
- how pregnant women feel about eating and weight gain during pregnancy
- students views of schizophrenia what they think causes it, how much it impacts the individual's life and how it is best treated
- how lesbian, gay, and bisexual individuals feel about health and chronic illnesses like arthritis.

#### WARD LAB: NEUROBIOLOGY OF LEARNING AND ADAPTIVE BEHAVIOUR

Organisms have to constantly modify and adapt their behaviour to changing situations and circumstances. The ability to do this dictates whether we will be successful across changing circumstances. These adaptive behaviours require the coordinated exertion of cognitive and motivational processes and these can be further partitioned into different psychological components. Using cutting-edge molecular genetic approaches combined with rigorous and sophisticated behavioural methods, our lab analyses the neurobiology of these complex adaptive behaviours and attempts to

understand them in terms of their component psychological parts. We also study the role of temporal information processing in adaptive behaviour, and work to characterise motivational and cognitive deficits in animal models of Schizophrenia.



#### **ZAJAC LAB: FORENSIC PSYCHOLOGY**

Dr Rachel Zajac's lab works at the intersection of psychology and law. Our primary goal is to conduct research that helps to identify and prevent miscarriages of justice. More specifically, we study the factors that influence people's ability to provide reliable evidence about events that they have witnessed. We also look at how expectations and biases can impair people's ability to interpret forensic evidence.

Some of our research questions include:

- How should we interview child, adolescent, and adult witnesses to ensure that their accounts are as complete and accurate as possible?
- Can an eyewitness's evidence become contaminated through discussions with another witness to the same crime?
- What effect does cross-examination have on children's and adults' testimony?
- Why is mistaken identification such a large contributor to wrongful convictions, and how can we help people to avoid this error?
- How can cognitive shortcuts interfere with the interpretation of forensic evidence such as fingerprints, bite marks, and bloodstains?

The research produced by the Zajac laboratory continues to be in demand from the forensic community, with Dr Zajac regularly disseminating the laboratory's findings to the professionals who operate within the criminal justice system.

#### Clinical Psychology Centre

The Clinical Psychology Centre (CPC) is a training centre for students in the Clinical Psychology Training Programme which provides a referral based assessment and treatment service to children and adults referred from the community. Each year, postgraduate students work part-time at the CPC seeing referrals under close supervision from Registered Clinical Psychologists.

Working in the clinic is a challenging time but is also very rewarding as the students learn how to apply their academic knowledge and develop their clinical skills to help people overcome their personal problems.



# Where are they now?

## What some of our past students are up to...



**Dr Rob Munn**PhD completed 2013
Postdoctoral position at Stanford University

Rob completed his PhD titled, *Circadian modulation in hippocampal activity: A temporal code for episodic memory?*, under the supervision of Professor David Bilkey.

His research focused on the representation of time on circadian timescales in the hippocampus. Rob now has a postdoctoral position at Stanford University.

"One of the things I'm most excited about is working in what is maybe the single most exciting place for Neuroscience research in the world at the moment! Karl Diesseroth at Neurobio invented optogenetics: a technique in which cells are made to express proteins called rhodopsins through transfecting them with a virus. Rhodopsins are normally expressed in cells of the eye and make the cell sensitive to light. This means we can insert a fibre-optic cable into the brain and reversibly activate/deactivate cells of interest. This technique is maybe the biggest breakthrough in neuroscience techniques in the last decade (or longer!)."

One of Rob's first projects is to prevent cells expressing a certain type of receptor using a viral vector, and a natural extension of the project is to use optogenetics to do this reversibly.

"Lisa Giocomo is a brand new Assistant Professor, and there's just her, me and a grad student in the lab at the moment. I guess I'm looking forward to the "Silicon Valley Startup" feel of working in such a small team with such advanced and cutting-edge techniques. I'm also looking forward to meeting a bunch of the heavy-hitters in my field, several of whom are running active collaborations with my principal investigator."



#### **Lucy Devlin**

Masters and PGDipClPs completed 2012 Employed as a Clinical Psychologist

"From a young age I was fascinated by people and what makes people different. It made sense for me to follow my interest by studying psychology. Initially, I studied psychology and neuroscience, but I soon realised that they were pretty closely linked and that I could learn a lot about the brain through psychology.

I later concluded that what I really wanted to do was to apply my knowledge to real people and to learn practical ways to help them. Clinical Psychology was a perfect way for me to do that.

I am now working in a residential and community-based rehabilitation service for people with traumatic brain injury or stroke.

My role is broad and includes providing psychological support and education for clients and their families, managing behaviour, training staff, and conducting cognitive assessments. The role is challenging at times, but it is hugely rewarding.

I work with a diverse range of people from all sorts of backgrounds, and who have experienced a wide range of injuries.

The most rewarding part of the role is witnessing people progress and realising how much of a difference we make in their recoveries."



Hayley Guiney
Masters completed 2012
Employed by the Health Promotion Agency

Hayley completed an undergraduate degree in psychology before taking on a multidisciplinary Master of Science.

Supervised in part by Dr Liana Machado, her thesis included elements of cognitive psychology, physiology, and physical education.

Hayley is now a researcher for the Health Promotion Agency (HPA), a Crown entity responsible for promoting public health and informing public health policy through marketing campaigns, research, and other initiatives. The research completed by the HPA is designed to be highly relevant to current public health issues, such as tobacco control, alcohol, immunisation, nutrition, and physical activity (among others).

"My job is great because it is interesting, challenging, and practical. Psychology was an essential precursor to this job as I have to think critically about different research designs and how they might be used to inform us about a wide range of health-related behaviours.

My plan for the future is to continue with public health research that leads towards improved health for all New Zealanders."



Dr Niki Osborne

PhD completed 2013 Employed by Environmental Science and Research (ESR)

Niki Osborne completed her PhD "Did you find what you were looking for?" The effect of context on the interpretation of forensic evidence, under the supervision of Dr Rachel Zajac.

In her thesis, she investigated how decisions about forensic evidence (ie, fingerprints, bitemarks, and children's drawings) can be swayed by more than just the evidence itself.

She now works for the Institute of Environmental Science and Research (ESR) as a Research Associate within the Forensic Business Group. ESR is the sole provider of forensic services to the New Zealand Police. Niki says that she is learning new skills every day and loves seeing how her results will translate to real crime scene investigations.

Niki's current research projects are focused on two main areas: 1) investigating the decision-making process of bloodstain pattern analysts, and the cognitive factors that influence these decisions, and 2) improving juror understanding of complex forensic evidence through the use of educational tools and 3D crime scene technology. "Every day I have to pinch myself. I feel so lucky to have my dream job, working for the real CSI: New Zealand."

#### The social side of Psychology

It isn't all work: the things our postgrad social committee organise for us all ...



FltLt Stephen Wright

Masters completed 2012 Employed by NZ Royal Air Force

Stephen completed his Masters thesis under the supervision of Associate Professor David O'Hare in 2012. He was drawn to O'Hare's lab after taking Applied Psychology (now Cognitive Engineering) in his third year of study. "The videos and explanations of aviation accidents opened my eyes to the world of applied psychology. Being able to apply psychological principles in exciting real world situations really set this area apart." Stephen's thesis focused on the transition from analog to digital flight displays in cockpits, a very current issue in the world of aviation, and one that the Royal New Zealand Air Force (RNZAF) is facing.

As a student, Stephen applied to become a psychologist in the RNZAF. He was accepted, and began work immediately after completing his thesis. His initial work focused on human factors, aviation psychology, post-deployment issues, and the aircrew/ officer selection. "Some of the highlights have been aerobatics in a CT-4 Airtrainer, a flight in an Iroquois, and flying the A109 helicopter simulator."

Stephen was due to complete his Initial Officer Training Course (IOTC)course in November 2013, and is now commissioned with the rank of Flying Officer, in his psychologist registration year.



**Dr Damian Scarf** 

PhD completed 2011 Lecturer, Department of Psychology, University of Otago

Damian's PhD focused on the representation and planning of sequences in pigeons under the supervision of Professor Mike Colombo.

During the course of his PhD Damian received a Fulbright scholarship and worked as a visiting researcher in Professor Herb Terrace's Primate Cognition Lab at Columbia University. While at Columbia University, Damian investigated the planning abilities of rhesus monkeys and transitive preference in children. Damian received several other scholarships during his PhD as well as a number of travel grants. Damian's PhD was also placed on the University of Otago Division of Sciences List of Exception PhD Theses.

After completing his PhD Damian went on to be Postdoctoral Fellow, and subsequently a Research Fellow, in Professor Harlene Hayne's child development lab. In Professor Hayne's lab Damian focused on memory development in young children and investigated whether children are born with an innate sense of right and wrong.

In 2013 Damian became a Lecturer in the Department of Psychology. The current focus of Damian's developmental work is mental time travel and the delay of gratification in young children. Damian's animal work currently focuses on the neurobiology of sequence learning in pigeons and cognitive abilities of parrots, including kea and kaka.

#### Meet OPSYC: Otago Psychology Student Committee

Enjoy working on committees? OPSYC are an incredible bunch of postgrads who help forge a link between staff and students and do lots of important things in the department such as:

- edit the  $\it think.$ magazine which showcases Psychology to the wider community
- organise social events for postgrads and staff
- · represent students at staff meetings
- represent students on the PEAS (Psychology Environmental Action Squad)
   committee

The committee welcomes new members to join their group. If you're interested, please email them at opsyc@psy.otago.ac.nz



From Left: Emma Beeby, Andrea Chin, Max Major, Phoebe Poulter Absent: Bridget Irvine, Marea Colombo

# Find out more about postgraduate study in Psychology at

otago.ac.nz/psychology/study/postgraduate/index.html

#### DEPARTMENT RANKINGS STRONGEST PREDICTOR OF EMPLOYMENT FOR POSTGRAD STUDENTS

School rankings, department rankings, and individual accomplishments: What factors predict obtaining employment after the PhD?

This is the title of an article published in the March 2013 Journal of the Association for Psychological Science: *Perspectives on Psychological Science*.

The authors agree that the strongest predictor of employment for postgrad students was the 'department-level rankings even while controlling for individual accomplishments, such as publications, posters, and teaching experience'. They go on to say that 'Equally accomplished applicants for an employment position were not equal, apparently, if they graduated from differently ranked departments'.

Read the article at pps.sagepub.com/content/8/2/208.abstract

# THE DEPARTMENT OF PSYCHOLOGY AT OTAGO HAS RANKED IN THE TOP 50 INTERNATIONALLY 3 YEARS RUNNING

In the QS World University Rankings by Subject, the Department of Psychology at Otago has been ranked in the top 50 internationally three years in a row.

Furthermore, in the latest Performance-Based Research Fund (PBRF) rating exercise, the Department of Psychology received the country's highest score for any nominated academic unit in any discipline.

Being rated the top department at the University of Otago confirms the research ethos employed by academic staff, research staff, and postgraduate students.

THE UNIVERSITY OF OTAGO HAS A LONG-STANDING REPUTATION FOR PROVIDING HIGH QUALITY TERTIARY EDUCATION. WE ARE PROUD, AND YOU CAN BE TOO, THAT THE DEPARTMENT OF PSYCHOLOGY TAKES A LEADING ROLE IN CONTINUING THAT TRADITION.



For further information please contact our department's postgraduate administrator: Cara Duffy Email: cduffy@psy.otago.ac.nz Tel 64 3 479 5049