“We are proud of the wide range of nationalities that make up our department – over 20 different nationalities.”
The Department of Psychiatry has been rated one of the UK’s nationally leading research groups in the three most recent Research Assessment Exercises, and it plays a leading role in the internationally excellent Cambridge Neuroscience community of researchers in neuroscience and mental health. The Department maintains close working relationships with two NHS trusts, the Cambridgeshire and Peterborough Foundation NHS Trust and the Cambridge University Hospitals NHS Trust, enjoys extensive interactions and on-going collaborative projects with other University departments, and has much national, international and industrial collaboration.

Areas of research in the Department include cognitive neuroscience, neuroimaging and neuropsychiatry, developmental psychiatry, epidemiology and health services research and molecular neuropathology. The Department is active in teaching psychiatry and related sciences at several different levels and also maintains significant clinical activities. Sitting within the School of Clinical Medicine, the Department occupies four separate locations and has approximately 145 members.

The Department of Psychiatry is committed to high quality graduate research. We currently have around 40 graduate students undertaking PhD and MPhil research degrees. Students are hosted across all our different groups, engaging in research as diverse as genetics, psychology, neuroimaging and epidemiology. Graduate students contribute actively to the development and life of the Department.
Dr Golam Khandaker is a psychiatrist interested in the interactions between the immune system, brain and mind. Funded by the Wellcome Trust, his research group investigates novel immunological mechanism and treatment for depression, schizophrenia and other psychiatric disorders. He is particularly interested in the role of inflammation (measured by cytokines, genes and peripheral immune cells). He uses population-based epidemiological and genetic studies to examine causality and to identify novel targets for therapeutic intervention. In addition, he uses clinical trials/experimental medicine studies to examine the effect of novel immune-modulating drugs on mood and cognition. He also uses immune and behavioural phenotyping to identify groups that may benefit from immunotherapies.
Dr Anne-Laura van Harmelen’s work aims to investigate why some children and adolescents develop mental health problems, and others do not. She has shown that a negative family environment where children are emotionally abused and/or neglected (child emotional maltreatment; CEM), is associated with differential structure and functioning of key emotional brain regions. She has also shown that CEM is associated with altered cognitive functioning. These cognitive and neurobiological effects help explain why individuals with CEM are vulnerable to develop mental health disorders.

More recently, Dr van Harmelen has started to take a developmental approach when examining the consequences of CEM. Using advanced structural equation modelling, her group showed that the age at which abuse and neglect occur determine its mental health consequences. This suggests that there may be crucial developmental time-windows that are especially sensitive to the negative impact of abuse and neglect. However, during these crucial time-periods, children and adolescents may similarly be sensitive to positive influences. In line with this idea, Dr van Harmelen recently showed that adolescent peer support reduces later depressive symptoms, and increases mental health resilience, after childhood family adversity.
Dr Petra Vertes’ work builds on methods and concepts from physics and bioinformatics, and applies them to fundamental problems in neuroscience. In particular, she is interested in the structure-function relationship in brain networks, from the microscopic scale of neurons (in *C. elegans*) to the large-scale connectivity of brain regions in the human brain. Insights into these questions are not only fascinating in their own right, but have important implications for our understanding and therapeutic approaches to cognitive impairments associated with psychiatric disorders, brain injury and ageing.

A recent focus of Dr Vertes’ work has been the development of bioinformatic tools to link neuroimaging maps of the brain with gene expression data from the Allen Brain Atlas. For example, as part of the NSPN consortium, she has applied these methods to implicate the risk genes for schizophrenia in normal maturational brain changes taking place in adolescence. This work was recognised by the Foreign Policy magazine, in naming Dr Vertes one of its Top 100 Global Thinkers in 2016.

Dr Vertes received a Masters degree in theoretical physics and a PhD in artificial neural networks from the University of Cambridge, and in 2014 she was awarded an MRC Fellowship in Bioinformatics. She is also one of the co-founders and organisers of the Cambridge Networks Network (CNN), a forum for academics across different disciplines who share an interest in Network Science.
Dr Kirstie Whitaker uses magnetic resonance images to understand the changes in the brain’s structure and function that underlie the emergence of schizophrenia and depression. Her work has shown that changes in myelin content in the brain’s grey matter increase through adolescence and that association cortex (the area of the brain that underpins complex cognition such as reasoning) continues to develop into your 20s and beyond.

Dr Whitaker is particularly passionate about ensuring that work is reproducible and can be replicated in independent data sets. She is committed to supporting early career researchers to ensure they can share their data and code while also following strict ethical guidelines. As a researcher at the Alan Turing Institute, Dr Whitaker focuses on how data science techniques can improve neuroimaging analyses, including the application of machine learning techniques to big data sets such as UK Biobank.

Dr Whitaker completed her PhD in Neuroscience at the University of California, Berkeley in 2012 and holds a BSc in Physics from the University of Bristol and an MSc in Medical Physics from the University of British Columbia. She joined the Department of Psychiatry in 2012 and conducted her postdoctoral research in the Brain Mapping Unit under the supervision of Professor Ed Bullmore. She remains a member of the Department as a Senior Research Associate.

Dr Whitaker is a Fulbright Scholarship alumna and was a 2016/17 Mozilla Fellow for Science. She will be the chair of the Organisation for Human Brain Mapping’s Open Science special interest group in 2019 and is currently serving as chair-elect. Kirstie was named, with her collaborator Petra Vertes, as a 2016 Global Thinker by Foreign Policy magazine.
Dr Hisham Ziauddeen is a psychiatrist, and divides his time between research and the clinic. His work examines the neuroscience of eating and reward-related behaviours using behavioural, neuroimaging and pharmacological approaches. His current research focuses on three additional areas: food-related decision-making and sensory processing, antipsychotic induced weight gain (in collaboration with Dr Emilio Fernandez-Egea), and psychiatric morbidity in hereditary diffuse gastric cancer (in collaboration with the gastric cancer clinic). Dr Ziauddeen is interested in the application of contemporary neuroscientific models of predictive processing and behavioural control to the understanding of reward related behaviours as well as to mental illness, particularly psychosis. These models, in conjunction with clinical psychiatry, also have a lot to offer to the understanding and treatment of illness behaviour across different physical conditions, and this is the focus of his ongoing work with the gastric cancer clinic.

In Dr Ziauddeen’s other capacities in the Department he runs the ‘Conversations with Experts by Experience’ teaching programme, led by people with lived experience of mental illness and designed for scientists studying mental illness. He is also one of the Clinical School’s Equality champions, and dabbles heavily in public engagement.
Neurosurgical management of brain tumours has entered a new paradigm, where resection is extended into the peri-tumoural margin to minimise the potential for recurrence or malignant transformation. Maximising the resection whilst minimising harm is complicated by difficulty in determining the edge of the tumour and limitations in mapping the function of apparently normal brain tissue surrounding the tumour.

Dr Rafael Romero-Garcia’s research aims to address the problem of accurately mapping cognitive functions in a way that is of value to surgeons. He uses connectomics to create functional and structural ‘wiring diagrams’ of the brain. Connectomics uses white matter connectivity and the synchronicity of brain signals, measured by magnetic resonance imaging (MRI), to model the brain as continuously interacting communication networks. The way these brain networks are organised is intimately related to cognitive functions, and is believed to be sensitive to changes in these networks due to injury or surgery. The objective of the research is to derive from pre-operative MRI and connectomic analysis an estimate of the potential risk of resecting tissue in terms of functional loss post-operatively, and from changes in connectomic measure pre- and post-operatively, the likelihood of recovery.

Dr Romero-Garcia will develop a demonstration system for surgical feedback, consisting of a surgical mannequin to which MRI images are mapped and a 3D pointer to orientate the surgeons to the connectomic data. Risk estimates of resecting tissue will come from data collected before and after surgical resection of brain tumours, and up to 12 months following surgery, to discover what properties of the connectome best predict cognitive outcomes and their recovery during rehabilitation. This combined technology will be tested in an observational study for its effectiveness in supporting surgical planning.
Dr Paul Wilkinson is University Lecturer and Honorary Consultant in Child and Adolescent Psychiatry. He carries out research into the neurobiology, epidemiology and treatment of depression and self-harm; and medical education. His particular clinical areas of interest are adolescent depression and self-harm. Dr Wilkinson works as a practitioner, supervisor and trainer of interpersonal psychotherapy, and is developing interpersonal counselling in the UK. He has been part of the group developing Improved Access to Psychological Therapies for Children and Young People in England.

Dr Wilkinson's future research plans include:

- Evaluation of community-delivered interpersonal counselling for adolescents with depressive symptoms;
- Risk and resilience factors for mental health in students; and factors that affect mental health help-seeking;
- The neuropsychology of self-harm;
- Development and evaluation of novel interventions for self-harm.

Dr Wilkinson also leads teaching of psychiatry to clinical medicine students at the University of Cambridge. His priorities here are to ensure that all new graduates have the appropriate psychiatric knowledge, skills and attitudes they need to be foundation year doctors; and to improve recruitment to psychiatry.
Dr Valerie Voon is a neuroscientist and neuropsychiatrist. Her research group focuses on mechanisms underlying impulsivity and compulsivity with special relevance to disorders of addiction. She uses multimodal imaging, neuromodulation, cognitive neuroscience, computational modeling and pharmacological challenges to address research questions. She has published over 130 manuscripts and book chapters and has numerous international speaker invitations.

Prior to her current post, Dr Voon was a Wellcome Trust Intermediate Fellow in Cambridge. She completed her psychiatry training in Toronto, Canada; held a movement disorders research fellowship at the National Institute of Neurological Disorders and Stroke in Bethesda, USA; and did her PhD in neuroscience at the University College London, UK.
Dr Li Su is a senior computational neuroscientist interested in applying multimodal imaging, advanced analysis methods and computational modelling in Lewy body dementia and other types of dementia. He also develops and applies multivariate methods for MEG/EEG, MRI and PET imaging. These methods aim to relate neuroimaging data with clinical, cognitive and neuropathological information in order to understand the complex etiology underlying different psychiatric and neurological conditions, as well as to improve diagnosis and treatment.

Dr Su uses PET, MEG/EEG, MR spectroscopy, structural and functional MRI to study patients with Lewy body dementia and compare them with healthy controls and the benchmark condition: Alzheimer’s disease. He also explores whether these biomarkers can be identified in asymptomatic adults with increased risks of dementia for early detection and intervention.

Dr Su leads the research theme on Computational Psychiatry, focusing on its application to dementia and other psychiatric conditions associated with cognitive impairments. This is because mainstream research in psychiatry remains largely descriptive, focusing on disease categorisation based on symptomology. However, computational psychiatry when combined with advanced neuroimaging offers insights into neurobiological mechanisms and makes potential drug discovery safer, faster and cheaper by validating treatment effects virtually on computational models.

Dr Su and his students have won several prestigious international awards, including from the International College of Geriatric Psychoneuropharmacology in 2015, and the International Psychogeriatric Association in 2016.
Dr Sam Chamberlain’s research and NHS work focuses on the neurobiology and treatment of impulsive and compulsive disorders. Key examples include attention-deficit hyperactivity disorder (ADHD), obsessive-compulsive disorder, gambling disorder, and Internet Use Disorder. These conditions are common, functionally impairing, but often hidden and under-treated.

Dr Chamberlain’s research involves examining impulsivity and compulsion using objective cognitive tests, innovative medications, and brain imaging. For example, he was the first to show that noradrenaline and serotonin, two key brain transmitters, play different roles in distinct aspects of impulsivity in humans. He identified several vulnerability markers for obsessive-compulsive disorders – cognitive problems that run in families of people with these conditions. Dr Chamberlain, along with collaborators in the US, identified a new treatment for gambling disorder, and showed that this medication works partly by enhancing cognition and brain activation in patients.

Dr Chamberlain feels strongly about promoting psychiatric and neuroscience research amongst students and trainees, providing opportunities to help with research, and gain publications.

Dr Chamberlain has published widely on impulsivity and compulsion, including first-authored papers in Science, the American Journal of Psychiatry, Biological Psychiatry, and the Archives of General Psychiatry. He is co-author of several books including ‘Clinical Guide to Obsessive Compulsive and Related Disorders’ and ‘Why Can’t I Stop? Reclaiming Your Life from a Behavioral Addiction’. He is Associate Editor at Neuroscience and Biobehavioral Reviews, and acts as reviewer for a variety of journals and organisations (including the European Commission Science Directorate). Dr Chamberlain is internationally recognised for his research work and has received various awards, including the Wyeth Award for Psychopharmacology from the British Association for Psychopharmacology, and a Clinical Fellowship from the Wellcome Trust.
Dr Rudolf Cardinal’s current research interests include the anonymisation and safe processing of clinical data for research; aspects of natural language processing; open-source computational tools for bedside neuropsychiatric assessment; and computational modelling of behaviour in disease and animal models of disease.

Dr Cardinal’s undergraduate degrees were in medicine and neuroscience and his PhD and MD degrees were in behavioural neuroscience, examining the neuropsychology of impulsivity and reinforcement processes. He then served as a Lecturer in Neuroscience. Dr Cardinal trained clinically in general medicine, followed by general adult and liaison psychiatry. His research interests include neural mechanisms of reinforcement and computational psychiatry in a broad sense, including clinical informatics and computational models of attentional selection. He is the academic lead clinician for research databases at the Cambridgeshire & Peterborough NHS Foundation Trust (CPFT).
Dr Graham Murray is a psychiatrist and neuroscientist. He uses cognitive and computational neuroscience techniques to investigate the pathophysiology of mental illness, and epidemiology to investigate the causes and consequences of mental disorder. He is interested in how the same symptoms (like hallucinations and delusions, or anhedonia) emerge in different psychiatric and neurological disorders, such as depression, schizophrenia or Parkinson’s Disease.

Dr Murray conducts pharmacological studies in patients and healthy volunteers to illuminate drug mechanisms of action, and help improve treatment of mental illness. A particular interest is in learning and decision-making, including predictive processing and prediction error based learning. Much of his research relates to his clinical work with CAMEO, the Cambridgeshire early psychosis service, which is a centre for the research and treatment of first episode of psychosis and psychosis risk. Other interests include cognitive developmental epidemiology and the relationship between cognitive development and mental illness across the lifespan; the investigation of the relationship between the aetiology and pathophysiology of mental illness; and population-based neuroscience. Here he takes advantage of large cohort databases that include genetic, cognitive and/or brain imaging measures, such as the 1946 British Birth cohort, the Northern Finland birth cohorts, and UK Biobank.

Dr Murray runs a multidisciplinary group, and welcomes applications from highly motivated individuals with a variety of backgrounds, including psychiatry, neurology, psychology, engineering, computer science, genetics, and neuroscience.
Neuroimaging is a constellation of image acquisition and data processing methodologies that open a window on the function and structure of the living brain. Over the last 25 years there has been a renaissance in experimental psychology and psychiatry from increased access to neuroimaging, resulting in key discoveries that are shaping our view of how the brain is organised and what changes occur that compromise cognition and mental health. Notwithstanding these important advances, neuroimaging has yet to find a direct role in clinical management.

Dr John Suckling’s objective is to develop and adapt new and established neuroimaging methodologies that have impact on the health and wellbeing of individuals. Completed studies include the investigation of talking therapies for adolescents with depression, and multicentre clinical trials of pharmacological treatments of psychosis. He is currently undertaking projects to quantify brain morphology and its relationship to the experience of hallucinations in patients with schizophrenia; the mapping of parallel functional connectivity pathways as a new way of understanding mental illness and its treatment; and in collaboration with The Alan Turing Institute, data-driven methods to uncover the natural clustering of brain structure and function as a putative taxonomy of mental health disorders.

Dr Suckling works with neurosurgeons using neuroimaging in the planning of resection margins for brain tumours that optimise survival and acquired cognitive deficits and their rehabilitation. Together with the Global Institute for Motorsport Safety he is working to characterise the effects of concussive injuries on brain function as an evidence-base for road-side diagnostic tests. Finally, in support of studies in brain and mind sciences, he is developing web-accessible technologies for capture, storage, and analysis of multivariate datasets that will link with electronic health records as a digital infrastructure for 21st century health science research.
Professor Simon Baron-Cohen is the author of *Mindblindness*, *The Essential Difference*, *Prenatal Testosterone in Mind*, and *Zero Degrees of Empathy*. He has edited scholarly anthologies including *Understanding Other Minds*. He has written books for parents and teachers including *Autism and Asperger Syndrome: The Facts*. He is author of the DVDs *Mind Reading* and *The Transporters*, to help children with autism learn emotion recognition, both nominated for BAFTA awards.

Professor Baron-Cohen formulated the ‘mindblindness’ theory of autism (1985) and the ‘prenatal sex steroid’ theory of autism (1997). He has also made contributions to the fields of autism prevalence and screening, autism genetics, autism neuroimaging, autism and technical ability, typical cognitive sex differences, and synaesthesia. He created the first UK clinic for adults with suspected Asperger Syndrome (1999) called the CLASS clinic (Cambridge Lifespan Asperger Syndrome Service). This has helped over 1,000 patients to have their disability recognised: the ‘lost generation’ of adults who had missed out on diagnosis in childhood. He appeared in the BBC2 documentary (2016) *Employable Me*, revealing the remarkable strengths in people with autism and discussing how to promote inclusion. He gave a keynote address to the United Nations in New York on Autism Awareness Day 2017 on the topic of *Autism and Human Rights*.

He is a Fellow of the British Psychological Society, the British Academy, and the American Psychological Association. He is Vice-President of the National Autistic Society, and President of the International Society for Autism Research (INSAR). He was Chair of the NICE Guideline Development Group for Autism (Adults). He is co-editor in chief of the journal *Molecular Autism* and is a National Institute of Health Research (NIHR) Senior Investigator.
Professor Ed Bullmore has two main research interests: brain networks and neuro-immunology. Brain network analysis can be applied to many different kinds of data, but most of his current focus is on human brain development during adolescence, which entails computational analysis of existing multi-modal MRI datasets. Professor Bullmore has recently co-authored a book, *Fundamentals of Brain Network Analysis*, which provides an introduction to some of the graph theoretical methods he has been using for brain network or connectome analysis. A PhD project in this area would be most suitable for someone with good background skills in data analysis and computer programming. His other main interest is understanding more about the interaction between the brain and the immune system, especially in depression. Working with other academic centres and pharma companies, he is coordinating efforts to develop new blood-based biomarkers and neuroimaging markers to identify depressed patients with inflammation, and to test new anti-inflammatory drugs for anti-depressant efficacy in a precisely defined sub-group of patients with inflamed depression. A PhD project in this area would be most suitable for someone with good background skills in medicine, psychiatry or immunology, but it could also be relevant to someone wanting to develop bioinformatic or data analytic skills.
Dr Karen Ersche is interested in drug addiction. Her enthusiasm for this field is rooted in the opportunity that science offers to make a difference to the lives of people affected by drug addiction. Just as scientific advances have fundamentally changed the concept of addiction from initially a character defect to eventually a brain disorder, she strongly believes that science can provide a pathway for the development of effective treatments for this disorder.

Dr Ersche’s research focuses on the neuropsychological correlates and neurochemical processes underlying addictive behaviour and the translation of this knowledge into therapeutic interventions. This work involves a combination of approaches including neuroimaging, neuropsychological testing, and pharmacological modulations. Together with colleagues from experimental psychology, she seeks to transpose paradigms from animal models to humans in order to establish translational evidence for abnormalities that have been deemed critical for the development and persistence of addiction.

Throughout her career, Dr Ersche has actively sought to break down traditional barriers in addiction research, bringing together interdisciplinary experts in order to better understand the complexities of drug addiction. Over the past few years she has been able to link previously unconnected areas of research such as immunology and metabolic sciences with drug addiction, improving the likelihood of the discovery and development of more effective treatments. She strongly believes that a holistic perspective on addiction is needed in order to improve lives, since the most substantial health burden arising from drug addiction lies not in the direct effects of drug intoxication, but in the secondary effects on physical health.
There is growing evidence that a great deal of our decision-making is driven not by conscious, reflective thinking but by an array of stimulus-driven processes operating below conscious awareness. These processes, rooted in our experiences and past actions, are further shaped by internal signals and can act as powerful drivers of behaviour. These behaviours can be hard to avoid even when they are ultimately harmful and when there are strong conscious motivations and desires to suppress them.

Through developing an understanding of these processes, and how they manifest and vary across individuals and groups, we may find clues to how they may be altered and how the corresponding behaviours may be controlled. Professor Paul Fletcher’s programme of research targets questions surrounding these phenomena. He uses combinations of structural and functional neuroimaging, pharmacological manipulations and behavioural studies in order to understand how the brain integrates bodily signals of hunger and satiety with environmental stimuli that predict rewards and drive consumption. By exploring how this integration may vary across individuals, and how it may be perturbed in certain clinical conditions, he aims to understand the complex of array of behaviours surrounding food choice and consumption. It is also anticipated that, through elucidating the mechanistic underpinnings of complex food-related behaviours, it will become possible to develop, refine and target interventions both at the individual and environmental levels.
Professor Peter Jones’ research interests are in the epidemiology of mental illness, particularly classical approaches to population distribution of illness, such as collaborations with James Kirkbride and [www.psymaptic.org](http://www.psymaptic.org); life course models in ALSPAC and other birth cohorts; and investigating the interfaces between mind, brain and body through population science. He also uses randomised designs, including trials, to study causes, treatments and mental health systems, for example the MRC SINAPPS-2 trial of immunological therapy for people with psychosis with autoantibodies to neurotransmitter receptors (with Alasdair Coles). A second example is observational studies of inflammatory processes as risks for psychiatric illness (with Golam Khandaker).

Professor Jones’ clinical interests are in early intervention for mental illness, particularly but not solely psychotic disorders, as evidence accumulates of mechanisms cutting across traditional diagnostic boundaries. He is currently President of [www.iepa.org.au](http://www.iepa.org.au). With Jesus Perez and other colleagues, Professor Jones was recently awarded a five-year, £2.5 million programme grant by NIHR for the Tailoring evidence-based psychological therapy for People with common mental disorder including Psychotic Experiences’ (TYPPEX) study, which builds on these ideas, seeing psychotic experiences in the population as expression of the more severe generalised dysfunction and distress. As well as illuminating the biology of these phenomena, the programme will lead to more efficient NHS services. Research with the dual purpose of illuminating biology and having practical impact is increasingly important, and part of Professor Jones’ remit as an NIHR CLAHRC director.
Professor John O’Brien leads the Old Age Psychiatry research group. Research interests of group include developing and clinically applying biomarkers, especially multi-modal MRI, MEG and PET imaging, to the differential and early diagnosis of dementia, including identifying those ‘at risk’ of future cognitive decline, and developing markers of disease progression. These imaging biomarkers are being applied to cohorts of patients with Alzheimer’s disease, Lewy Body dementia, Mild Cognitive impairment and Late-life depression. The group works closely with colleagues in other departments, especially Clinical Neurosciences, and many projects are inter-disciplinary and supported by core infrastructure within the Cambridge NIHR Biomedical Research Centre.

Professor O’Brien’s group is a core part of the Dementias Platform UK network, including the MR-PET harmonisation group, and is applying both MR-PET and high field strength (7T) MR in studies of dementia. It leads the imaging within the multi-site UK PREVENT study, a unique cohort of cognitively intact 40-60 years olds stratified by risk of future dementia.

Using anonymised e-records, the group is studying factors associated with early presentation and good and bad outcome in patients with Lewy body dementia within representative NHS services, and through a large NIHR Programme grant (DIAMOND-Lewy) is undertaking work to improve the diagnosis and management of Lewy body dementia within the NHS.

Professor O’Brien is also the NIHR National Specialty Lead for Dementia, and within the Dementias and Neurodegenerative Disease Research Network (DeNDRoN) undertakes a number of clinical studies in dementia, including trials of pharmacological and non-pharmacological management, especially through the Windsor Research Unit within CPFT Trust.
Psychiatric disorders (e.g. schizophrenia, attention deficit hyperactivity disorder, obsessive compulsive disorder and depression) are disorders of cognition, motivation and their interaction. Impaired cognition in psychiatric disorders includes problems in attention, learning, memory and decision-making. In schizophrenia, these tend to be the biggest barriers to good functional outcome and wellbeing rather than the psychiatric symptoms, such as hallucinations and delusions, which can be treated with anti-psychotic drugs.

Professor Barbara Sahakian’s laboratory aims to detect cognitive dysfunction using sensitive neuropsychological tests. For assessing cognition, motivation and wellbeing and functionality in daily living, the group uses objective computerised tests co-invented by Professor Sahakian, CANTAB and EMOTICOM (www.cambridgecognition.com), as well as subjective rating scales. CANTAB is used for assessing primarily ‘cold’ or non-emotional cognitive function, whereas EMOTICOM is for measuring ‘hot’ or social and emotional cognition. The laboratory also focuses on improving cognition, motivation and wellbeing in people with neurodegenerative conditions and psychiatric disorders. Two main approaches are taken: one is pharmacological and includes the use of cognitive enhancing drugs, such as modafinil and methylphenidate, and the other is psychological and includes cognitive training. The group has developed novel methods for delivering cognitive training by using app games on iPads and iPhones (www.peak.net). In studies with people with schizophrenia or amnestic mild cognitive impairment (aMCI), they have found that memory, global functioning and motivation improve, following training with ‘Wizard’ or ‘Game Show’. A future focus of the laboratory will be investigating impaired cognitive plasticity and goal-directed control in adolescents with obsessive compulsive disorder. They have recently found that adolescents with OCD have substantial learning impairments, and plan to identify the reasons for these and how they impact on functioning at school. Finally, another future aim is to develop approaches to improving cognition and wellbeing across the life span in healthy people.
I chose to apply to this unique and challenging one-year programme because of its focus on research, which permits total immersion into a specific area of scientific study. In this intensive programme, I was able to explore my subject in depth, and engage in a level of critical thought difficult to achieve in shorter MPhil or course-based programmes. During my time at Cambridge, I felt fully integrated into the rich and supportive research culture within the Department of Psychiatry. Although I did not take any formal courses, I found ample opportunity to expand my knowledge of my research subject including its theoretical foundations and the various techniques used in the field.

My supervisor went above and beyond to ensure that I was able to make the most of my year in Cambridge. Prior to my arrival we discussed and selected a suitable research project that was both challenging and meaningful, so that I was able to begin as soon as I arrived. She made her time and expertise available to me, and provided extensive feedback and constructive criticism for all my work, encouraging me to improve all aspects of my academic performance. Because of this support and guidance, within one year I was able to prepare several first-author papers for publication, and attend and present my research at an international conference, in addition to completing my MPhil dissertation.

My supervisor exemplified a level of commitment to her research and compassion for her participants, which both inspired and ensured that I never lost sight of the ultimate goals of our work and the lives this work aims to improve. My experience at Cambridge would not have been the same without the quality of supervision that I received and the atmosphere of supportive teamwork and productive collaboration that was cultivated. Overall, my experience within the Psychiatry Department fostered my academic, personal, and professional growth, as well as the formation of professional relationships that will continue to support and benefit me in my future professional and academic endeavours.

“My experience exceeded my expectations, in large part due to the exceptional support I received from the Psychiatry Department and my supervisor.”

Alanna Just
Gates Cambridge Scholar 2016–2017, MPhil in Medical Science
I joined the Department of Psychiatry in 2013, first as an MPhil student, and later, as a PhD student. I work on the genetics of autism and related traits with the aim of developing genetically informed stratification of the autism spectrum. What I really value about the research here is the mix of basic and clinical sciences. At the Autism Research Centre and other labs in the department, there’s research on wide-ranging ideas from the development of brain networks to developing apps to help autistic kids better communicate and understand social cues. However, whilst different labs are working on different questions, there is a sense of community and collaboration. In particular, the annual graduate student symposium and the postdoc day brings people from all the different labs together to brainstorm and swap ideas. I was also a student rep for the Department for close to two years where I helped organize journal clubs and freshers events. I also helped organize the first two postgraduate symposiums. It was a great experience to communicate what students want to the graduate committee.

Outside of the Department, I’ve also really enjoyed college life in Cambridge. It’s great to grab dinner or a drink after a long day’s work with people outside my field. There is so much happening in Cambridge: Here, you can row with Olympians, watch thespians on stage at the ADC, share a table with a Nobel laureate at the local cafe, or simply, let your hair down at one of the many parties in the colleges. There’s something for everyone! There really is no better place to conduct cutting-edge research.

“At the Autism Research Centre and other labs in the department, there’s research on wide-ranging ideas from the development of brain networks to developing apps to help autistic kids better communicate and understand social cues.”

Varun Warrier
MPhil and PhD student since 2013
The Graduate Education Committee’s main aim is to coordinate the recruitment of graduate students and to monitor and support graduate students whilst they are enrolled for a higher degree in the Department of Psychiatry. Currently three student representatives are members of this committee and each year we invite more students to join and ultimately contribute to the organisation of student activities, both social and study related. This is a fantastic opportunity which enables students to be involved in all student related matters in the Department and act as the students’ voice.

We are proud of the Cambridge Psychiatry Symposium that is now in its 3rd year, which takes place at Trinity College and which showcases the exciting and remarkable research of our graduate students. Trinity College is the perfect setting for this one-day conference with its history of scientific breakthroughs. Future PhD students’ research will be part of this great tradition and when you complete your graduate studies, Cambridge will be your stepping stone into a great career.
If you are thinking about studying in the Department of Psychiatry, further information about life as a research student can be found on the Graduate Admissions website, www.graduate.study.cam.ac.uk/courses.

Detailed instructions on how to apply can also be found on the Departmental website at www.psychiatry.cam.ac.uk/students/prospective/prospective-graduates/grad-how-to-apply.

For any general student enquiries not answered on these pages, please contact:

Adisa Broadhurst, 
Education Supervisor

E: ap686@medschl.cam.ac.uk
T: +44 (0)1223 465 237

Department of Psychiatry, 
University of Cambridge
Douglas House
188 Trumpington Road
Cambridge CB2 8AH