INSTITUTE OF PSYCHIATRY, PSYCHOLOGY & NEUROSCIENCE

KING'S College LONDON

IoPPN Research Festival 2025

Bridging disciplines, brain to behaviour

14.00-17.30
Wednesday 14 May 2025
Wolfson Lecture Theatre
Main IoPPN Building
London SE5 8AF

@kingsioppn

Welcome

We are delighted to welcome you to the 2025 IoPPN Research Festival, our annual celebration of the exciting and innovative research being conducted across the Institute of Psychiatry, Psychology & Neuroscience (IoPPN).

Throughout the festival, you will learn about the valuable work and research performed by professional staff and researchers across a range of career stages. We will also be celebrating our 3-Minute Thesis finalist and the winners of our Open Research, and Dean's Awards, highlighting the key role of open science and research integrity practices.

This year, we are especially pleased to welcome our keynote speakers Professor Edmund Sonuga-Barke, Professor Juliet Foster and Professor Kate Tchanturia.

Organising such an event would not be possible without the support and enthusiasm of many people. We extend our sincere gratitude to Annicka Ancliff, Hannah Warren, June Brown, Sam Westwood, Jolanta Zanelli, Diana Shamsutdinova, Olivier Brock, Chloe Chung Yi Wong, and Robin Maginn, as well as all other Research & Innovation Committee members and the Press & Communications Department for their invaluable guidance and support.

We hope you will all enjoy the afternoon.

Professor Matthew Hotopf
Executive Dean, Institute of Psychiatry, Psychology & Neuroscience

Professor Paolo Deluca
Chair of the Research & Innovation Committee

Dr Darren Williams
Research & Innovation Committee Lead for IoPPN Research Festival

About this year's theme

This year's theme for the IoPPN Research Festival is 'Bridging disciplines: brain to behaviour'.

This theme reflects the interdisciplinary nature of our work at the IoPPN and our commitment to integrating knowledge across fields to drive innovation in mental health, neuroscience and psychology.

The Festival is an opportunity to showcase our innovative and ground-breaking research, to highlight the process of turning discoveries in the lab, clinic and community into interventions that improve the health of individuals and the public.

We are pleased to welcome academics from across the IoPPN's diverse disciplines, with presentations covering topics ranging from genetics and emerging therapeutics to neuroscience and digital mental health.

Early Career Research Awards 2024–25

Autumn 2024

Early Career Research Awards
Institute of Psychiatry, Psychology & Neuroscience

Dr Martine Skumlien
Research Associate
Department of Addictions Sciences

Dr Letitia Perez Sisques
Research Associate
Centre for Developmental Neurobiology

Early Career Research Awards
NIHR Maudsley Biomedical Research Centre

Dr Giulia Catarinussi
Research Associate
Department of Psychological Medicine

Spring 2025

Early Career Research Awards
Institute of Psychiatry, Psychology & Neuroscience

Dr Felipe Ferreira
Postdoctoral Research Associate
Centre for Developmental Neurobiology

Dr Laura Naysmith
Postdoctoral Research Associate
Department of Neuroimaging

Early Career Research Awards
NIHR Maudsley Biomedical Research Centre

Dr Bronagh McCoy
Research Associate
Department of Forensic and Neurodevelopmental Sciences

Event programme

14.00	**Welcome** Professor Corinne Houart, Professor Paolo Deluca and Dr Darren Williams	
14.10	**Keynote** Professor Edmund Sonuga-Barke	RE-STAR – A multidisciplinary adventure in participatory translational science
14.30	Dr Quinton Deeley	The power of belief
14.35	Dr Sian Oram	Creativity, collaboration, and coercive control: rethinking research with survivors
14.40	Dr Jose Manuel Valera Bermejo	Non-motor symptoms in Huntington's disease
14.45	Anna Verey	Sexual dysfunction in male UK military personnel deployed to Afghanistan: the ADVANCE cohort study
14.50	Dr Raquel Iniesta	How to make an ethical AI for healthcare
14.55	Professor Uwe Drescher	Unravelling the protective role of IL-10 in neuro-inflammation: insights from a genetic mouse model relevant to autism
15.00	**3MT Finalist** Andrea Ulrichsen	Can sleep predict the ups and downs of bipolar disorder?
15.05	Serena Mitchell	Research integrity at King's
15.10	Dr Aminul Ahmed	Neurotrauma – can we do better?
15.15	**Open Research Award Winner** Ayla Pollmann	Open science in PhD research
15.20	Dr Christoph Mueller	Data, dementia, and drugs: what can we learn from real-world patient records?
15.25	**Coffee Break**	

15.40	**Keynote** Professor Juliet Foster	The 'whole university' approach to mental health and wellbeing: a sociocultural turn and a research challenge
16.00	Dr Josephine Ocloo	A Life Less Safe: exploring health inequities for Black and Asian users of mental health services through qualitative research and film
16.05	Julia Brown	Will Power: the impact of legacy giving at the IoPPN
16.10	**Dean's Award Winner** Dr Fran Denk	Research integrity – beyond the obvious
16.15	Dr Paris Lalousis	Artificial Intelligence in mental health: from prediction to personalisation
16.20	**Open Research Award Winner** Professor Matthew Grubb	Sharing is caring: open data, better science
16.25	Claire Ballard	What about the parents? The OPTIMA programme – supporting families of children waiting for clinical assessment
16.30	Dr Devin Terhune	Nitrous oxide induces hallucinations by overweighting perceptual priors
16.35	Dr Polly Radcliffe	Navigating care for women who use and are in treatment for using drugs in the perinatal period: outcomes from the Stepping Stones Study
16.40	Dr Deepak Khuperkar	Crossing scales in neuroscience – from single molecules to brain function
16.45	**Keynote** Professor Kate Tchanturia	Autism and eating disorders
17.05	**Closing remarks** Professor Matthew Hotopf	

Keynote speaker

Professor Edmund Sonuga-Barke

Professor of Developmental Psychology, Psychiatry and Neuroscience
Department of Child & Adolescent Psychiatry
School of Academic Psychiatry

RE-STAR – A multidisciplinary adventure in participatory translational science

Synopsis

Progress toward science-driven interventions for people with neuro-developmental conditions has stalled – raising fundamental questions about the value of the paradigm on which our science is currently based.

In this talk, I argue that collaborating with scholars from disciplines with different intellectual traditions and young people with experience-derived insights, has the power to shake up our thinking, making us explore alternative paradigms in ways that can reinvigorate our science. I illustrate this with reference to RE-STAR, a UKRI programme of research, that 'flips' the dominant disorder paradigm to build and test a new hypothesis about why people with ADHD and autism are at an increased risk of developing depression.

Biography

Professor Edmund Sonuga-Barke is a developmental psychologist who studies the causes, course and developmental consequences of neurodevelopmental conditions. Motivated by his own childhood experience of learning difficulties, he has devoted his research career to improving the life chances of young people, especially those with neurodevelopmental conditions, such as ADHD. To this end, he has developed new ways of thinking about and studying neurodevelopment using experimental developmental neuroscience methods and theories. Edmund is an elected Fellow of The Academy of Medical Sciences, The British Academy, The Danish Academy of Honorary Skou Professors and a member of the Academia Europea. He is Editor-in-Chief of *The Journal of Child Psychology and Psychiatry*. He is a Roman Catholic husband and father, soul music aficionado and lifelong Derby County fan.

Dr Quinton Deeley
Senior Lecturer in Social Behaviour and Neurodevelopment
Department of Forensic & Neurodevelopmental Science
School of Academic Psychiatry

The power of belief

Synopsis

Suggested effects in hypnosis, functional neurological and dissociative symptoms, and religiously recognised states of revelation, mediumship, and possession, all involve alterations in the control, ownership, or awareness of mental contents and actions influenced by beliefs and expectations. This suggests that shared cognitive and brain processes may contribute to all of these phenomena. Yet case histories and vignettes show how these alterations in experience and behaviour also vary in important respects. We discuss experimental and cultural research which shows how control, ownership, and awareness of mental contents and actions can vary, and the family of cognitive and brain processes involved in them.

Biography

Dr Quinton Deeley chairs the Maudsley Philosophy Group, and Social and Cultural Neuroscience Group at the IoPPN. He has researched the relations between culture, cognition and brain function since studying Theology and Religious Studies at Cambridge University, medicine at Guys and St Thomas', and psychiatry at the Maudsley Hospital. His work brings cognitive neuroscience research into dialogue with humanities to improve understanding of cultural variation in psychopathology and religious cognition, experience, and behaviour. Current research topics include using suggestions to alter self-experience, voice hearing in spiritualist mediums, and investigating how religious practices modulate cognition using a Virtual Reality reconstruction of an ancient Greek religious ritual.

Dr Sian Oram
Reader in Women's Mental Health
Department of Health Service & Population Research
School of Mental Health & Psychological Sciences

Creativity, collaboration, and coercive control: rethinking research with survivors

Synopsis

How can research centre the voices of those most affected by coercive control? In this talk, I reflect on our creative, lived experience-led workshops that brought together survivors to explore coercive control, justice, and recovery through art, poetry, and collaborative discussion. These workshops opened up new ways of thinking about research – not just as a means of gathering data, but as a space for expression, solidarity, and healing. I will share how this approach is shaping our ongoing research on justice and mental wellbeing after coercive control and discuss what creative, collaborative methods can offer to research on violence and abuse.

Biography

Dr Sian Oram leads research on how violence and abuse impact mental health and what promotes mental wellbeing among people affected by violence and abuse. Her work aims to improve the quality, relevance, and impact of research and services for survivors of violence, abuse, and exploitation, and to ensure that survivor voices shape both policy and practice. She directs the Violence, Abuse and Mental Health Network, a cross-sector initiative advancing research, policy, and practice to prevent and respond to the mental health impacts of violence and abuse. She also leads the Modern Slavery Core Outcome Set project, setting standards for survivor-centred research and service delivery.

Dr J Manuel Valera-Bermejo
Clinical Research Fellow
Department of Neuroimaging
School of Neuroscience

Non-motor symptoms in Huntington's disease

Synopsis

Huntington's disease (HD) is a genetic disorder primarily characterised by motor impairment. However, while motor symptoms are the most prominent phenotypic manifestation, non-motor symptoms significantly impact patients' quality of life. This study aims to validate the Movement Disorder Society Non-Motor Symptoms Scale in individuals with HD. Specifically, it will assess the scale's reliability, validity, and responsiveness by administering it to a cohort of HD patients alongside other clinical measures. Key psychometric properties, including internal consistency, test-retest reliability, and construct validity, will be analysed to determine the scale's suitability for assessing non-motor symptoms in HD.

Biography

Dr (Jose) Manuel Valera-Bermejo is a Postdoctoral Clinical Research Fellow in the Neuroimaging Department, currently working on a neuroimaging project on Huntington's disease. He earned his medical degree in Mexico City, graduating summa cum laude. He then completed a PhD in Clinical Neurosciences and Neuroimaging at the University of Sheffield. He has extensive experience in medical postgraduate education and clinical research.

Anna Verey
Research Associate
King's Centre for Military Health Research
School of Academic Psychiatry

Sexual dysfunction in male UK military personnel deployed to Afghanistan: the ADVANCE cohort study

Synopsis

Some combat injuries, eg genitourinary (GU) injuries are associated with sexual dysfunction (SD). GU injuries are estimated to have increased by 350 per cent since 9/11. The ADVANCE study investigates long-term physical and psycho-social outcomes of combat injured UK Armed Forces personnel following deployment to Afghanistan. We compared rates of SD between the injured and uninjured group and between those with limb loss and those injured without limb loss. The injured group had over a twofold greater risk of reporting SD than the uninjured group; similar rates of SD were found in those with limb loss and those injured without limb loss.

Biography

Anna Verey works as a Research Associate on the Armed Services Trauma Rehabilitation Outcome Study (ADVANCE), where she leads the qualitative component of ADVANCE-INVEST, a five-year project examining the transition outcomes for battlefield casualties. Additionally, she investigates the rates, and experiences, of sexual dysfunction for ADVANCE participants. Anna has worked at the King's Centre for Military Health Research since 2014, previously delivering *Support to Families of Wounded, Injured, or Sick Service Personnel – An Investigation of Current Service Provision and Potential Gaps', the 'Service Parents' and Adolescents' Challenges and Experiences Study.*

Dr Raquel Iniesta
Reader in Statistical Learning for Precision Medicine
Department of Biostatistics & Health Informatics
School of Mental Health & Psychological Sciences

How to make an ethical AI for healthcare

Synopsis

As Artificial Intelligence (AI) rapidly advances in healthcare, critical ethical challenges emerge. Is it safe for AI to prescribe medications? Can clinicians ethically rely on AI for diagnoses? How can we build trust in AI systems? What role does patient subjectivity play in this evolving landscape? Are we at risk of dehumanisation in AI-driven medicine? And how can both clinicians and patients remain empowered during these transformative times? In my talk, I will present my research on developing five human-focused principles designed as part of a framework of actionable practices to ensure human integrity and dignity in AI-assisted medicine.

Biography

Dr Raquel Iniesta is a Reader in Statistical Learning for Precision Medicine at the Department of Biostatistics & Health Informatics. Having the patient at the centre of her research, her lab develops safe AI models that transform complex health data into something meaningful for patients: from assisting clinicians on diagnosing complex diseases to aid them on the difficult task of choosing the right treatment. By developing ethical frameworks that help translate ethical principles into actionable practices, Raquel's group works to delineate how responsible AI models can preserve patients' dignity by avoiding dehumanisation and motivating empowerment in an excitingly evolving technological medical era.

Professor Uwe Drescher

Professor for Molecular Neuroscience
Centre for Developmental Neurobiology
School of Neuroscience

Unravelling the protective role of IL-10 in neuro-inflammation: insights from a genetic mouse model relevant to autism

Synopsis

In a genetic mouse model of autism, male mutant mice typically show social deficits, while female mutants do not. However, treating male mutants with an anti-inflammatory drug restores normal social behaviour.

Our molecular analysis identifies the anti-inflammatory cytokine IL-10 as a key factor in this process. We hypothesise that IL-10 is a sexually dimorphic, anti-inflammatory cytokine that protects female KO mice from neuroinflammation, thereby preventing social interaction deficits.

We are currently investigating whether virally mediated overexpression of IL-10 in the mouse forebrain can restore normal social behaviour.

Biography

Uwe Drescher is Professor of Molecular Neurobiology at the MRC Centre for Neurodevelopmental Disorders (MRC CNDD) and the Centre for Developmental Neurobiology (CDN) at King's College London. Before coming to the UK, he worked as a group leader at the Max-Planck-Institute for Developmental Biology in Tübingen, with F Bonhoeffer on neural circuit development in the visual system. Since then, Uwe has continued this line of research at King's, with a growing focus in recent years on the role of neuro-immune interactions in autism.

He is a chairperson of the biennial AXON developmental neuroscience conferences, a faculty member of F1000 (Faculty of 1000) in developmental neurobiology, and serves on the editorial board of Frontiers in Cellular Neuroscience.

Three Minute Thesis Finalist

Andrea Ulrichsen

PhD Student
Department of Psychological Medicine
School of Academic Psychiatry

Can sleep predict the ups and downs of bipolar disorder?

Synopsis

Bipolar disorder is a severe chronic mental illness, affecting around five per cent of the world's population. It is characterised by fluctuations in mood, energy and cognition, with episodes of mania and depression. Onset of mood episodes can feel unpredictable and unmanageable. My research focuses on the prospect of using changes in sleep patterns to predict when changes in mood will occur. Knowing when a new episode is happening could give some control back to patients, letting them know when extra focus is needed and implement strategies to manage the mood changes.

Biography

Andrea Ulrichsen is a third year PhD student, studying prophylactic approaches to management of bipolar disorder. She has previously worked at King's as a research assistant, as well as in clinical practice assisting in the treatments of people with mental illness. She has a master's degree in psychology of mental health from London Metropolitan University, and a bachelor's degree in medicine from the University of Copenhagen. She has lived in London nearly seven years but is originally from Denmark. It has always been her dream and goal to work towards making the world a safer and better place for people with mental illness.

Dr Serena Mitchell
Research Integrity Office
King's College London

Research integrity at King's

Synopsis

Research integrity and good research practices are integral to high-quality, high-impact research, and essential for safeguarding trust in King's research. This is achieved by conducting research with the core values of honesty, rigour, openness, transparency, care, respect and accountability in mind. With increasing scrutiny of research and researchers, the case for active consideration of research integrity has never been more pressing. In this talk, Serena will discuss the importance of research integrity and highlight the support available from the Research Integrity Office and the IoPPN Research Integrity Advisors.

Biography

Dr Serena Mitchell completed a PhD in Organic Chemistry at University College London in 2017. She came to King's first as a Mass Spectrometry Technician in the Chemistry Department and later moving into a central role within the Research Management and Innovation Directorate, supporting the management of several core research facilities. For the past four years, she has worked in the Research Integrity Office, building up a wealth of expertise in promoting good research practices, working with researchers to rectify issues of poor practice and managing research misconduct investigations.

Dr Aminul Ahmed
Senior Lecturer in Neurosurgery
Wolfson Sensory, Pain and Regeneration Centre
School of Neuroscience

Neurotrauma – can we do better?

Synopsis

I will present the current research opportunities and projects, including translations pipelines, to improve outcomes following neurotrauma. Despite much research, treatments are lacking in both Traumatic Brain Injury and Spinal Cord Injury.

Biography

Dr Aminul Ahmed is a Senior Lecturer in Neurosurgery and a Consultant Neurosurgeon based at King's College Hospital (KCH). His research includes investigating the use of advanced therapeutics for regeneration and repair following Traumatic Brain Injury (TBI) and Spinal Cord Injury (SCI). This includes endogenous and transplanted stem cells and the use of gene therapy, including viral vector delivered treatments, in models of TBI and SCI. He is establishing a translational pathway for the use of advanced therapies for first-in-human studies. He leads on projects to co-ordinate the study of neurotrauma in patients at KCH, including biomarker analysis and development of treatment strategies. Aminul also uses primary live human neural tissue for research and aims to foster broader collaborations within IoPPN.

Open Research Award Winner

Ayla Pollmann

PhD Student
Department of Psychology
School of Mental Health & Psychological Sciences

Open science in PhD research

Synopsis

Open science is transforming how we conduct and share research. In this talk, I will discuss how I applied open science practices in my PhD research on adolescent adversities. From preregistration and data sharing to working with a youth advisory group, I will highlight how these approaches improve research transparency, reproducibility, and real-world impact. I will also share practical ways researchers can integrate open practices into their work and why fostering a culture of openness benefits the entire scientific community.

Biography

Ayla Pollmann is currently working as a Data Scientist after submitting her PhD in Developmental Neuropsychology. During her PhD, she was part of the Lifespan Modelling and Psychometrics lab and an affiliated visiting researcher at the Stress & Development lab at Harvard University (USA). She holds two master's degrees from the University of Groningen (Netherlands) in 'Clinical Psychology' and 'Youth 0-21, Society and Policy'. In her PhD research, she investigated adolescent adversities, mental health, and neurodevelopment. Her research capitalised on recent advances in statistical methodologies and large-scale cohort studies (eg, ALSPAC, ABCD).

Dr Christoph Mueller
Reader in Ageing and Mental Health Data Science
Department of Psychological Medicine
School of Academic Psychiatry

Data, dementia, and drugs: what can we learn from real-world patient records?

Synopsis

Mental health conditions, such as depression and psychosis, are common in later life. Dementia is also the leading cause of death in the UK; and the interplay between 'functional' and 'organic' mental health conditions is complex. Research on anonymised patient records (via the Clinical Record Interactive Search system) can help us to disentangle some of this complexity and personalise treatment. Key findings are that loneliness, higher brain age, and new-onset depression increase dementia risk, while bipolar disorder may be protective. Certain medications, as anticholinergics or sedatives, increase hospitalisation and mortality risks and blood-brain barrier-crossing incontinence drugs accelerate memory decline more than non-crossing ones.

Biography

Dr Christoph Mueller is a Reader in Ageing and Mental Health Data Science at the IoPPN and a Consultant Old Age Psychiatrist at South London and Maudsley NHS Foundation Trust. His research uses real world data from the Clinical Record Interactive Search system (anonymised electronic health records from the Trust) to improve the care of dementia and other mental health conditions in older age. Christoph is an associate editor for the *International Journal of Geriatric Psychiatry* and has recently taken on a lead role in the 'Interventions' theme of the newly awarded NIHR HealthTech Research Centre in Brain Health.

Keynote

Professor Juliet Foster

Dean of Education
Institute of Psychiatry, Psychology & Neuroscience

The 'whole university' approach to mental health and wellbeing: a sociocultural turn and a research challenge

Synopsis

Universities are struggling to meet rising demand for support services. While there are multiple reasons for what the media refers to as a 'crisis' in student mental health, there is increasing recognition that any response should be grounded in a more settings-based approach. The 'whole university' consideration of mental health and wellbeing for students and staff focuses not only on support services, but also on all other aspects of the university, including teaching and learning, and the wider social and physical environment. As such, it can be seen as a sociocultural approach, bringing both opportunities and challenges to research.

Biography

Professor Juliet Foster is Dean of Education at the IoPPN and a social psychologist. As Academic Lead for Student Mental Health and Wellbeing at King's, she has worked in particular to bring academic and professional services colleagues together to engage in research into student mental health and wellbeing, and is part of a number of collaborative projects based in the IoPPN and beyond. Juliet is also an assessor for the University Mental Health Charter and a trustee of Student Minds, the UK's student mental health charity.

Dr Josephine Ocloo
Senior Research Fellow
Department of Health Service & Population Research
School of Mental Health & Psychological Sciences

A Life Less Safe:
exploring health inequities for Black and Asian users of mental health services through qualitative research and film

Synopsis

This work explored whether COVID-19 exacerbated ethnic health inequalities in adults with serious mental and physical health conditions. The project was funded by The Health Foundation in a partnership between King's College London, University of Sussex, Black Thrive and Peer Researchers. Qualitative research was led by Dr Josephine Ocloo and quantitative research by Professor Jayati Das-Munshi. The qualitative interviews formed the basis of a highly innovative short film, involving peer researchers and NHS England lead on mental health equalities Dr Jacqui Dyer. The film was screened at the Brixton Ritzy cinema on World Mental Health Day, 10 October 2024.

Biography

Dr Josephine Ocloo is a social scientist and activist-scholar at IoPPN. Josephine left her senior lecturing post in social work and came into patient safety after her daughter died because of a serious untoward incident in healthcare. She completed a PhD in 2008 from the University of Surrey, looking at medical harm. In 2008 she was invited to become a Patients for Patient Safety Champion, part of the Patient Safety Programme at the WHO. She has recently been awarded a large grant of £2.6m to look at Epistemic Exclusion and Patient Safety, with harmed patients from diverse backgrounds.

Julia Brown
Head of Legacy & In-Memory Giving
King's College London

Will Power:
the impact of legacy giving at the IoPPN

Synopsis

In the UK, charity legacy income is predicted to reach £5bn by 2030. It is the fastest growing philanthropic income stream in the charity sector as the Baby Boomers and Generation X start to pass on their assets in what is being dubbed the 'greatest wealth transfer' in history. This talk aims to highlight this opportunity, showcase examples of how legacy donations have helped research at the IoPPN and suggest what can be done to capitalise on this moment to drive more philanthropic legacy donations to the IoPPN.

Biography

Julia Brown is Head of Legacy & In-Memory Giving at King's College London. She is responsible for raising income for the University from donations left in Wills and from gifts made in memory of loved ones. She is an experienced fundraiser with over 20 years working in philanthropy in the UK and US. Julia works to deliver the legacy programme across all nine faculties at King's, raising awareness of the impact that gifts in Wills have on many areas of our work including: student support, medical research, our library collections and campus redevelopment programmes. She works with external supporters, alumni and staff and would be delighted to speak with anyone that might be interested in leaving a gift in their Will to King's.

Dean's Award

Dr Franziska Denk

Reader in Neuroscience
Wolfson Sensory, Pain & Regeneration Centre
School of Neuroscience

Research integrity – beyond the obvious

Synopsis

Franziska will briefly talk about research integrity and how it has impacted how she conducts her pre-clinical research.

Biography

Dr Franziska Denk is a Reader at IoPPN, where she works on neuro-immune-stromal cell interactions in the context of chronic pain. Her lab uses transgenic models, stem cell derived human cell culture systems and high-throughput molecular analyses. Franziska's team is funded by the Wellcome Trust, UKRI, the European Union, industry and several charities. Her group is passionate about data sharing and interdisciplinary research in an open, positive research culture. Franziska is co-Director of the Wellcome Trust funded PhD Training Scheme in Neuro-Immune Interactions in Health and Disease.

Dr Paris Lalousis
Lecturer in Artificial Intelligence in Mental Health
Department of Psychosis Studies
School of Academic Psychiatry

Artificial Intelligence in mental health: from prediction to personalisation

Synopsis

Artificial Intelligence is transforming how we understand, predict, and support mental health. In this talk, I will give a brief overview of how we are using AI to develop more precise and personalised models of mental illness focusing on real-world applications in depression and psychosis.

Biography

Dr Lalousis is a Lecturer in Artificial Intelligence in Mental Health at King's College London. He has a background in psychology and brain imaging, with experience in both research and clinical roles in Greece and the UK. He completed a joint PhD through the University of Birmingham and the University of Melbourne, and later worked on an NIH-funded project developing machine learning tools for psychosis. Now, he leads the AIM lab, where he uses advanced AI techniques to combine data from multiple sources to improve our understanding and treatment of mental health conditions like psychosis, depression, and dementia.

Open Research Award Winner

Professor Matthew Grubb

Professor in Neuroscience
Centre for Developmental Neurobiology
School of Neuroscience

Sharing is caring: open data, better science

Synopsis

Making science as open as possible benefits everyone, but is not always easy. In this talk, Matt will share his experience of open data sharing, and provide some tips and tricks to help make the process simpler and smoother.

Biography

Matt Grubb is Professor of Neuroscience in the Centre for Developmental Neurobiology, leading a group investigating the roles of neuronal activity in shaping nervous system development, plasticity and regeneration. A strong commitment to Open Science underpins everything his team does, recognised by the British Neuroscience Association Individual Researcher Credibility Prize in 2022.

Claire Ballard
Research Assistant
Department of Child & Adolescent Psychiatry
School of Academic Psychiatry

What about the parents? The OPTIMA programme – supporting families of children waiting for clinical assessment

Synopsis

OPTIMA is an NIHR-funded randomised control trial, assessing the clinical and cost effectiveness of a digital-app based parent training programme, 'STEPS'. The app is intended as an additional support to parents whose children are awaiting clinical assessment due to challenging behaviour. Data collection on the trial is complete and results are expected imminently. Claire's talk will highlight some emerging themes from OPTIMA's qualitative work, illuminating the experiences of parents going through the clinical referral process with their children. She will also share the invaluable contribution of the programme's vibrant and engaged advisory panel of 'experts by experience'.

Biography

Claire Ballard is a Research Assistant in Professor Sonuga-Barke's Experimental Psychopathology and Neuro-Development (ExPAND) Group at the IoPPN and is interested in parental wellbeing, with a focus on supporting neurodivergent families. She currently works on the NIHR-funded OPTIMA study which is trialling a parenting support app. As part of this role, Claire facilitates an advisory panel, optimising the valuable insights of parents with lived experience of the referral process for child mental health/behavioural support services. Away from academia, Claire works in private practice as a counsellor, supporting clients through a range of life challenges and emotional difficulties.

Dr Devin Terhune
Reader in Experimental Psychology
Department of Psychology
School of Mental Health & Psychological Sciences

Nitrous oxide induces hallucinations by overweighting perceptual priors

Synopsis

Hallucinations are commonly reported during inhalation of the dissociative anaesthetic nitrous oxide (N_2O) but the neurocognitive substrates of these effects are unknown. We evaluated whether N_2O-mediated dissociative states facilitate hallucinations as measured by false alarms in an auditory signal-detection paradigm. Participants displayed higher hallucination rates during N_2O than placebo inhalation with task performance characterised by greater relative reliance on priors than sensory evidence in the N_2O than in the placebo condition. These results suggest that transient NMDAR hypofunction (N_2O inhalation) induces hallucinations by increasing relative reliance on priors.

Biography

Dr Devin B Terhune is a Reader in Experimental Psychology in the Department of Psychology where he leads the Awareness & Modulation lab. His research draws on methods and theories from cognitive neuroscience, experimental psychology, and psychiatry with an aim to characterise different features of awareness, with a focus on dissociative states and hallucinations, and how they can be modulated using verbal suggestion, placebo interventions, and pharmacological agents.

Dr Polly Radcliffe
Senior Research Fellow
Department of Addictions Sciences
School of Academic Psychiatry

Navigating care for women who use and are in treatment for using drugs in the perinatal period: outcomes from the Stepping Stones Study

Synopsis

Drug-use in the perinatal period raises complex health and social care issues for mothers and their children. Thirty-six women were recruited from maternity services in four sites in England and Scotland. Longitudinal qualitative interviews investigated experiences of care. Provision of specific services and support at key 'intercept' points in the care pathway were consequential for countering stigma and offering women opportunities to demonstrate their fitness as mothers. Approaches to care for women with the highest level of need – and who presented late to services – were highly variable. Evidence for best practice and systems-change are shared.

Biography

Dr Polly Radcliffe has over twenty years of experience of qualitative research in health and social care that has focused on gender and identity including in the context of substance use treatment, maternity care and mental health care services. Her research has explored the intersectional barriers to care for groups with multiple and complex needs and how multidisciplinary care systems can respond. Recent studies have explored how parents navigate stigmatised drug user identities. She has extensive experience of accessing and engaging marginalised groups of research participants, and coproducing research with people with lived and living experience of alcohol and other drugs.

Dr Deepak Khuperkar
Research Associate
Department of Basic & Clinical Neuroscience
School of Neuroscience

Crossing scales in neuroscience – from single molecules to brain function

Synopsis

A major scientific challenge today is understanding how biological scales are interconnected. While we have deep insights into individual levels – from molecular machines like ribosomes to entire organ systems – we know little about their interrelations. This coordination is vital for adaptive responses to environmental changes and survival. My future research programme will address this gap by exploring neuronal responses to hypothermia, spanning from single molecules to neurons and the brain. Using a combination of novel single-molecule imaging technologies, stem cell-based tools, genetic engineering, single-cell analysis, and multi-omics, I aim to uncover how the brain adapts to temperature changes across biological scales.

Biography

Dr Deepak Khuperkar is a postdoctoral researcher at the Department of Basic and Clinical Neuroscience and the UK Dementia Research Institute (UK-DRI) at King's College London. Trained in RNA biology and advanced microscopy, he has played a key role in developing new single-molecule imaging technologies to advance our understanding of RNA regulation. Transitioning into neuroscience, his research now focuses on RNA regulation in neuronal health and neurodegeneration. Combining expertise across disciplines, he investigates how neurons adapt to environmental changes using cutting-edge technologies. Deepak has received the IoPPN Early Career Research Award, BCN Innovation Award, UK-DRI Proteomics Award and Discovery Pilot Award.

Keynote

Professor Kate Tchanturia

Professor of Psychology in Eating Disorders
Department of Psychological Medicine
School of Academic Psychiatry

Autism and eating disorders

Synopsis

Over the last six years in collaboration with patients, families and carers, research and clinical colleagues, we produced a clinical pathway called PEACE (the patients' choice of acronym) where we tried to pull together stakeholder perspectives, research and clinical resources to collaborate with experts working in the area of autism, and to start tailoring support. This pathway is receiving positive feedback from people with lived experience and clinicians, who are gaining more confidence in recognising autism and making adaptations in their delivery of treatments. This talk aims to share experience of how to develop autism friendly clinical pathway for the patients with eating disorders.

Biography

Kate Tchanturia, MBE, is Professor of Psychology in Eating Disorders at IoPPN and a Consultant Psychologist of National Eating Disorder Service in South London and Maudsley NHS Foundation Trust. Kate has 40 years of experience working in the field of clinical psychology. Her clinical and research interest covers women's mental health, experimental work in cognitive and emotional processing and translational work from experimental psychology to innovative psychological interventions. She is a member and fellow of Academy Europe, British Psychological Society, Academy of Eating Disorders, Higher Education Academy and few other professional bodies. She has edited three books and authored more than 300 peer reviewed papers, and delivered training and teaching around the world.

Notes

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