Linden Parkes, Ph.D.

Department of Bioengineering
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Academic Positions

Postdoctoral Research Fellow **Philadelphia, PA**
University of Pennsylvania, Department of Bioengineering *July 2019 - present*
- Advisors: Prof. Danielle S. Bassett, Associate Prof. Theodore D. Satterthwaite

Visiting Scholar **Nijmegen, The Netherlands**
Donders Institute for Brain, Cognition and Behaviour *Sept. 2018 - Oct. 2018*
- Advisors: Prof. Christian Beckmann, Dr. Andre Marquand

Education

Doctor of Philosophy **Melbourne, Australia**
Monash University *March 2014 - June 2019*
- Thesis: Mapping brain networks in health and mental disorder with structural and functional Magnetic Resonance Imaging
- Advisors: Prof. Murat Yucel, Prof. Alex Fornito, Dr. Ben Fulcher

Bachelor of Science (Honors) **Melbourne, Australia**
Swinburne University of Technology *2009 - 2013*
- Thesis: Mapping language processes using Magnetoencephalography.
- Advisor: Associate Prof. Conrad Perry
- Honors, First Class
- Dux

Research Employment

Research Assisstant **Melbourne, Australia**
Monash Biomedical Imaging *2018*
- Analysis of positron emission tomography (PET) data

Research Engineer **Melbourne, Australia**
Torus Games & Cogstate *2016 - 2017*
- Developed gamified cognitive tests for neuroscience research

Magnetoencephalography Technician **Melbourne, Australia**
Swinburne Univerisity *2013*
- Collection, preprocessing, and analysis of Magnetoencephalography (MEG) data

Teaching

Teacher's Assistant **Philadelphia, PA**
University of Pennsylvania, Department of Bioengineering *2020*
- Class: Network Neuroscience
- Course evaluation score: 3.57/4

Guest Lecturer **Philadelphia, PA**
University of Pennsylvania, Department of Bioengineering *2019*
- Class: Network Neuroscience

Guest Lecturer **Melbourne, Australia**
Monash University *2017 - 2018*
- Class: Neuroscience Methods

Recitation Tutor **Melbourne, Australia**
Swinburne University *2014 - 2015*
- Class: Undergraduate Psychology

Recitation Tutor **Melbourne, Australia**
Swinburne University *2013*

- Class: Undergraduate Physiology

Funding (pending)

Career Transition Awards

K99/R00 Pathway to Independence Award *2021 - 2026*
National Institute of Mental Health (NIMH)

- Project title: Developing prognostic neuroimaging biomarkers of the psychosis spectrum using network control theory
- $969,546 USD
- Received competitive impact score and program official has endorsed application for funding

Funding (awarded)

Fellowships & Scholarships

Young Investigator Award *2021 - 2022*
Brain & Behavior Research Foundation

- Project title: Hybrid neurodevelopmental normative models for psychosis
- $70,000 USD

Monash University Postgraduade Publication Award *2018*
Monash University

- $6,300 AUD

Monash University Graduate Research Scholarship *2014 - 2018*
Monash University

- $20,000 AUD

Australian Postgraduate Award Research Scholarship *2014 - 2018*
Australian Government

- $91,000 AUD

Grants

Innovations Connections Grant *2016 - 2017*
Department of Industry, Innovation and Science, Australia

- $50,000 AUD
- Associate investigator

Travel Awards

Abstract Merit Award *2021*
Organization for Human Brain Mapping

- virtual, no monetary component

Abstract Merit Award *2020*
Organization for Human Brain Mapping

- $3,000 USD

Donders-Monash Erasmus Travel Award *2018*
Donders Institute for Brain, Cognition and Behaviour | Monash University

- $3,200 AUD

Future Leaders Travel Award *2015*
Monash Institute of Cognitive and Clinical Neurosciences

- $5,000 AUD

Presentations

Network controllability in transmodal cortex predicts positive psychosis spectrum symptoms *2021*
Organization for Human Brain Mapping

- Oral presention
- 3-minute summary available on YouTube

Network Neuroscience *2021*

DataPhilly

- Invited talk
- available on YouTube

Average controllability better predicts cognition when compared to strength *2020*
Organization for Human Brain Mapping

- Oral presention

Psychopathology explain individual's unique deviations from normative neurodevelopment *2020*
Organization for Human Brain Mapping

- Oral presention

Dimensional psychiatry in corticostriatal circuits: lessons learnt from resting-state fMRI data *2018*
University of Pennsylvania

- Invited talk

Transdiagnostic biomarkers in psychiatry *2018*
Centre of Excellence for Integrative Brain Function, Melbourne, Australia

- Invited talk

Confounds in rs-fMRI processing *2016*
Swinburne Univerisity, Melbourne, Australia

- Invited talk

Transcriptional signatures of connectomic subregions of the human striatum *2015*
Students of Brain Research, Melbourne, Australia

- Oral presention

Examining the N400m in affectively negative sentences. A magnetoencephalography study *2013*
Australasian Cognitive Neuroscience Conference

- Oral presention

Posters

First Author

Network controllability in transmodal cortex predicts positive psychosis spectrum symptoms *2021*
Organization for Human Brain Mapping

Network controllability in transmodal cortex predicts positive psychosis spectrum symptoms *2021*
Society of Biological Psychiatry

Psychopathology explain individual's unique deviations from normative neurodevelopment *2020*
Organization for Human Brain Mapping

Impulsivity and compulsivity correlate with effective connectivity in corticostriatal circuits *2019*
Organization for Human Brain Mapping

Impulsivity and compulsivity correlate with effective connectivity in corticostriatal circuits *2018*
Australasian Cognitive Neuroscience Conference

Evaluating the efficacy and sensitivity of motion correction strategies for rs-fMRI *2018*
Organization for Human Brain Mapping

Efficacy, reliability, and sensitivity of motion correction strategies for resting-state functional MRI *2017*
IEEE International Symposium on Biomedical Imaging

Efficacy, reliability, and sensitivity of motion correction strategies for resting-state functional MRI *2017*
Students of Brain Research

Academic Service

Committees

Organization for Human Brain Mapping, Student and Postdoc Special Interest Group *2019 - 2021*
Treasurer

Australasian Cognitive Neuroscience Society, Early Career Researchers Committee *2017*
Committee Member

Australasian Cognitive Neuroscience Society, Executive Committee *2017*
Committee Member

Students of Brain Research *2016*
Treasurer

Supervision & Mentorship

Ashlea Segal *2018 - present*
PhD Student, Monash University

Tayla Currie *2018*
Honors Student, Monash University

John Fallon *2017*
Honors Student, Monash University

Luisa Prochazkova *2016*
International Intern, Monash University

Kristina Sabaroedin *2016*
Honors Student, Monash University

Lauren Den Ouden *2016*
Honors Student, Monash University

Stuart Oldham *2016*
Honors Student, Monash University

Danielle Amiet *2016*
Honors Student, Monash University

Outreach and community engagement

International Mentoring Programme *2021*
Organization for Human Brain Mapping, Student and Postdoc Special Interest Grou

- Mentor

NeuroDay *2018*
Methodist Ladies' College, Melbourne, Australia

- Co-organizer
- Presenter

BMH Mentor Forum *2018*
Brain & Mental Health Research Hub, Monash University

- Co-organizer
- Mentor

MBI Student Forum *2014 - 2015*
Monash Biomedical Imaging, Monash University

- Co-organizer
- Presenter

Peer Review

- NeuroImage
- Human Brain Mapping
- Network Neuroscience
- Scientific Reports
- Biological Psychiatry
- Psychological Medicine
- Neuropsychologia
- NeuroImage: Clinical
- Psychiatry Research: Neuroimaging
- Harvard Review of Psychiatry
- International Gambling Studies
- Journal of Cerebral Blood Flow & Metabolism

Select Publications

Citations = 690, h-index = 13, i10-index = 16

For a complete list of my publications see my Google Scholar

First-author

Parkes L, Moore TM, Calkins ME, Cieslak M, Roalf DR, Wolf DH, Gur RC, Gur RE, Satterthwaite TD & Bassett DS (2021). Network controllability in transmodal cortex predicts positive psychosis spectrum symptoms. *Biological Psychiatry*.

Parkes L, Moore TM, Calkins ME, Cook PA, Cieslak M, Roalf DR, Wolf DH, Gur RC, Gur RE, Satterthwaite TD & Bassett DS (2021). Transdiagnostic dimensions of psychopathology explain individuals' unique deviations from normative neurodevelopment in brain structure. *Translational Psychiatry*.

Parkes L, Satterthwaite TD & Bassett DS (2020). Towards precise resting-state fMRI biomarkers in psychiatry: synthesizing developments in transdiagnostic research, dimensional models of psychopathology, and normative neurodevelopment. *Current Opinion in Neurobiology*.

Parkes L, Tiego J, Aquino K, Braganza L, Chamberlain SR, Fontenelle L, Harrison BJ, Lorenzetti V, Paton B, Razi A, Fornito A, & Yucel M (2019). Transdiagnostic variations in impulsivity and compulsivity in obsessive-compulsive disorder and gambling disorder correlate with effective connectivity in cortical-striatal-thalamic-cortical circuits. *NeuroImage*.

Parkes L, Fulcher B, Yucel M, & Fornito A (2018). An evaluation of the efficacy, reliability, and sensitivity of motion correction strategies for resting-state functional MRI. *NeuroImage*.

- Amongst the top 20 downloaded from the journal in 2018
- In the top 0.01% most cited publications relative to other publications in 2018 in the field of Neuroscience

Parkes L, Fulcher B, Yucel M, & Fornito A (2017). Transcriptional signatures of connectomic subregions of the human striatum. *Genes, Brain and Behavior*.

- Amongst the top 20 downloaded from the journal in 2017

*Prochazkova L, ***Parkes L**, Dawson A, Youssef G, Ferreira GM, Lorenzetti V, Segrave RA, Fontenelle LF, & Yucel M (2017). Unpacking the role of self-reported compulsivity and impulsivity in obsessive-compulsive disorder. *CNS spectrums*.

**These authors contributed equally.*

Parkes L, Perry C, & Goodin P (2016). Examining the N400m in affectively negative sentences. A magnetoencephalography study. *Psychophysiology*.

Book chapters

Segrave RA, Hendrikse J, & **Parkes L**, (2019). DBS, TMS and tDCS for obsessive compulsive disorder. In *A Transdiagnostic Approach to Obsessions, Compulsions and Related Phenomena*. Cambridge University Press