


Linden Parkes, Ph.D.

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 lindenmp

 LindenParkes

Academic Positions

Postdoctoral Research Fellow

University of Pennsylvania, Department of Bioengineering

◦ Advisors: Prof. Danielle S. Bassett, Associate Prof. Theodore D. Satterthwaite

Philadelphia, PA

July 2019 - present

Visiting Scholar

Donders Institute for Brain, Cognition and Behaviour

◦ Advisors: Prof. Christian Beckmann, Dr. Andre Marquand

Nijmegen, The Netherlands

Sept. 2018 - Oct. 2018

Education

Doctor of Philosophy

Monash University

◦ 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

Melbourne, Australia

March 2014 - June 2019

Bachelor of Science (Honors)

Swinburne University of Technology

◦ Thesis: Mapping language processes using Magnetoencephalography.

◦ Advisor: Associate Prof. Conrad Perry

◦ Honors, First Class

◦ Dux

Melbourne, Australia

2009 - 2013

Funding (pending)

Career Transition Awards

K99/R00 Pathway to Independence Award

2021 - 2026

National Institute of Mental Health (NIMH)

◦ Project: 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: Hybrid neurodevelopmental normative models for psychosis

◦ \$70,000 USD

Monash University Postgraduate 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

Select Publications

Citations = 730, h-index = 13, i10-index = 16

For a complete list of my publications see my [Google Scholar](#)

Postdoc papers

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](#).

- Invited opinion piece

PhD papers

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.

Undergraduate papers

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

Open Science Contributions

Toolkits

Network Control

https://github.com/BassettLab/control_package

 Python

Predictive Clinical Neuroscience



<https://github.com/amarquand/PCNtoolkit>

 Python

Reproducibility

https://github.com/lindenmp/neurodev_cs_predictive

 Python

- Code to reproduce results presented in [Parkes et al. \(2021\) Biological Psychiatry](#)
https://github.com/lindenmp/normative_neurodev_cs_t1  Python
- Code to reproduce results presented in [Parkes et al. \(2021\) Translational Psychiatry](#)
<https://github.com/lindenmp/rs-fMRI>  Matlab
- Code to reproduce results presented in [Parkes et al. \(2018\) NeuroImage](#) and [Parkes et al. \(2019\) NeuroImage](#)

Research Employment

Research Assistant <i>Monash Biomedical Imaging</i>	Melbourne, Australia 2018
○ Analysis of positron emission tomography (PET) data	
Research Engineer <i>Torus Games & Cogstate</i>	Melbourne, Australia 2016 - 2017
○ Developed gamified cognitive tests for neuroscience research	
Magnetoencephalography Technician <i>Swinburne University</i>	Melbourne, Australia 2013
○ Collection, preprocessing, and analysis of Magnetoencephalography (MEG) data	

Teaching Experience

Teacher's Assistant <i>University of Pennsylvania, Department of Bioengineering</i>	Philadelphia, PA 2020
○ Class: Network Neuroscience	
○ Course evaluation score: 3.57/4	
Guest Lecturer <i>University of Pennsylvania, Department of Bioengineering</i>	Philadelphia, PA 2019
○ Class: Network Neuroscience	
Guest Lecturer <i>Monash University</i>	Melbourne, Australia 2017 - 2018
○ Class: Neuroscience Methods	
Recitation Tutor <i>Swinburne University</i>	Melbourne, Australia 2014 - 2015
○ Class: Undergraduate Psychology	
Recitation Tutor <i>Swinburne University</i>	Melbourne, Australia 2013
○ Class: Undergraduate Physiology	

Awards

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 Organization for Human Brain Mapping <ul style="list-style-type: none">Oral presentation3-minute summary available on YouTube	2021
Network Neuroscience DataPhilly <ul style="list-style-type: none">Invited talkAvailable on YouTube	2021
Average controllability better predicts cognition when compared to strength Organization for Human Brain Mapping <ul style="list-style-type: none">Symposium	2020
Psychopathology explain individual's unique deviations from normative neurodevelopment Organization for Human Brain Mapping <ul style="list-style-type: none">Oral presentation	2020
Dimensional psychiatry in corticostriatal circuits: lessons learnt from resting-state fMRI data University of Pennsylvania <ul style="list-style-type: none">Invited talk	2018
Transdiagnostic biomarkers in psychiatry Centre of Excellence for Integrative Brain Function, Melbourne, Australia <ul style="list-style-type: none">Invited talk	2018
Confounds in rs-fMRI processing Swinburne University, Melbourne, Australia <ul style="list-style-type: none">Invited talk	2016
Transcriptional signatures of connectomic subregions of the human striatum Students of Brain Research, Melbourne, Australia <ul style="list-style-type: none">Oral presentation	2015
Examining the N400m in affectively negative sentences. A magnetoencephalography study Australasian Cognitive Neuroscience Conference <ul style="list-style-type: none">Oral presentation	2013

Posters

First Author	
Network controllability in transmodal cortex predicts positive psychosis spectrum symptoms Organization for Human Brain Mapping	2021
Network controllability in transmodal cortex predicts positive psychosis spectrum symptoms Society of Biological Psychiatry	2021
Psychopathology explain individual's unique deviations from normative neurodevelopment Organization for Human Brain Mapping	2020
Impulsivity and compulsivity correlate with effective connectivity in corticostriatal circuits Organization for Human Brain Mapping	2019
Impulsivity and compulsivity correlate with effective connectivity in corticostriatal circuits Australasian Cognitive Neuroscience Conference	2018
Evaluating the efficacy and sensitivity of motion correction strategies for rs-fMRI Organization for Human Brain Mapping	2018
Efficacy, reliability, and sensitivity of motion correction strategies for resting-state functional MRI IEEE International Symposium on Biomedical Imaging	2017
Efficacy, reliability, and sensitivity of motion correction strategies for resting-state functional MRI Students of Brain Research	2017

Academic Service

Committees

Organization for Human Brain Mapping, Student and Postdoc Special Interest Group	<i>2019 - 2021</i>
Treasurer	
Australasian Cognitive Neuroscience Society, Early Career Researchers Committee	<i>2017</i>
Committee Member	
Australasian Cognitive Neuroscience Society, Executive Committee	<i>2017</i>
ECR Representative	
Students of Brain Research	<i>2016</i>
Treasurer	

Supervision & Mentorship

Ashlea Segal	<i>2018 - present</i>
Graduate Student, Monash University	
Tayla Currie	<i>2018</i>
Undergraduate Honors Student, Monash University	
John Fallon	<i>2017</i>
Undergraduate Honors Student, Monash University	
Luisa Prochazkova	<i>2016</i>
International Visiting Scholar, Monash University	
Kristina Sabaroedin	<i>2016</i>
Undergraduate Honors Student, Monash University	
Lauren Den Ouden	<i>2016</i>
Undergraduate Honors Student, Monash University	
Stuart Oldham	<i>2016</i>
Undergraduate Honors Student, Monash University	
Danielle Amiet	<i>2016</i>
Undergraduate Honors Student, Monash University	

Outreach & Community Engagement

Neuroimaging Best Practices Beyond Open Science	<i>2021</i>
Organization for Human Brain Mapping, Student and Postdoc Special Interest Group	
○ Moderator, panelist	
Link with Mentors	<i>2021</i>
Organization for Human Brain Mapping, Student and Postdoc Special Interest Group	
○ Moderator	
International Mentoring Programme	<i>2021</i>
Organization for Human Brain Mapping, Student and Postdoc Special Interest Group	
○ Mentor	
Network Control Theory for Neuroscientists, Education Workshop	<i>2020</i>
Organization for Human Brain Mapping	
○ Organizer, presenter	
Link with Mentors	<i>2020</i>
Organization for Human Brain Mapping, Student and Postdoc Special Interest Group	
○ Moderator	
NeuroDay	<i>2018</i>
Methodist Ladies' College, Melbourne, Australia	
○ Organizer, presenter	
BMH Mentor Forum	<i>2018</i>
Brain & Mental Health Research Hub, Monash University	
○ Organizer, mentor	
MBI Student Forum	<i>2014 - 2015</i>

Monash Biomedical Imaging, Monash University

- Organizer, mentor, presenter

Journal Peer Review.....

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