


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](#)

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](#).

- Invited opinion piece

Parkes L, Tiegio 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

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

- o \$3,200 AUD

Future Leaders Travel Award

2015

Monash Institute of Cognitive and Clinical Neurosciences

- o \$5,000 AUD

Research Employment

Research Assistant

Melbourne, Australia

Monash Biomedical Imaging

2018

- o Analysis of positron emission tomography (PET) data

Research Engineer

Melbourne, Australia

Torus Games & Cogstate

2016 - 2017

- o Developed gamified cognitive tests for neuroscience research

Magnetoencephalography Technician

Melbourne, Australia

Swinburne University

2013

- o Collection, preprocessing, and analysis of Magnetoencephalography (MEG) data

Teaching Experience

Teacher's Assistant

Philadelphia, PA

University of Pennsylvania, Department of Bioengineering

2020

- o Class: Network Neuroscience
- o Course evaluation score: 3.57/4

Guest Lecturer

Philadelphia, PA

University of Pennsylvania, Department of Bioengineering

2019

- o Class: Network Neuroscience

Guest Lecturer

Melbourne, Australia

Monash University

2017 - 2018

- o Class: Neuroscience Methods

Recitation Tutor

Melbourne, Australia

Swinburne University

2014 - 2015

- o Class: Undergraduate Psychology

Recitation Tutor

Melbourne, Australia

Swinburne University

2013

- o Class: Undergraduate Physiology

Presentations

Network controllability in transmodal cortex predicts positive psychosis spectrum symptoms

2021

Organization for Human Brain Mapping

- o Oral presentation
- o 3-minute summary available on [YouTube](#)

Network Neuroscience

2021

DataPhilly

- o Invited talk
- o Available on [YouTube](#)

Average controllability better predicts cognition when compared to strength

2020

Organization for Human Brain Mapping

- o Symposium

Psychopathology explain individual's unique deviations from normative neurodevelopment

2020

Organization for Human Brain Mapping

- o Oral presentation

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 University, Melbourne, Australia

◦ Invited talk

Transcriptional signatures of connectomic subregions of the human striatum 2015

Students of Brain Research, Melbourne, Australia

◦ Oral presentation

Examining the N400m in affectively negative sentences. A magnetoencephalography study 2013

Australasian Cognitive Neuroscience Conference

◦ Oral presentation

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

ECR Representative

Students of Brain Research 2016

Treasurer

Supervision & Mentorship

Ashlea Segal 2018 - present

Graduate Student, Monash University

Tayla Currie 2018

Undergraduate Honors Student, Monash University

John Fallon 2017

Undergraduate Honors Student, Monash University

Luisa Prochazkova

2016

International Visiting Scholar, Monash University

Kristina Sabaroedin

2016

Undergraduate Honors Student, Monash University

Lauren Den Ouden

2016

Undergraduate Honors Student, Monash University

Stuart Oldham

2016

Undergraduate Honors Student, Monash University

Danielle Amiet

2016

Undergraduate Honors Student, Monash University

Outreach & Community Engagement

Neuroimaging Best Practices Beyond Open Science

2021

Organization for Human Brain Mapping, Student and Postdoc Special Interest Group

- Moderator, panelist

Link with Mentors

2021

Organization for Human Brain Mapping, Student and Postdoc Special Interest Group

- Moderator

International Mentoring Programme

2021

Organization for Human Brain Mapping, Student and Postdoc Special Interest Group

- Mentor

Network Control Theory for Neuroscientists, Education Workshop

2020

Organization for Human Brain Mapping

- Organizer, presenter

Link with Mentors

2020

Organization for Human Brain Mapping, Student and Postdoc Special Interest Group

- Moderator

NeuroDay

2018

Methodist Ladies' College, Melbourne, Australia

- Organizer, presenter

BMH Mentor Forum

2018

Brain & Mental Health Research Hub, Monash University

- Organizer, mentor

MBI Student Forum

2014 - 2015

Monash Biomedical Imaging, Monash University

- Organizer, mentor, presenter

Journal 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

Open Science Contributions

Toolkits

Network Control

 Python

https://github.com/BassettLab/control_package

Predictive Clinical Neuroscience

 Python

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

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. \(2018\) Neurolmage](#) and [Parkes et al. \(2019\) Neurolmage](#)