

Elvisha Dhamala

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ACADEMIC APPOINTMENTS

2021- **Postdoctoral Associate, Yale University, New Haven, USA**
 Advisor: Avram Holmes

EDUCATION

2021 **Ph.D. (Neuroscience), Weill Cornell Medicine, New York, USA**
*Multimodal Connectome Mapping of Sex Differences and Cognitive Abilities:
 A Machine Learning Approach*
 Advisor: Amy Kuceyeski

2017 **B.Sc. (Neuroscience), McGill University, Montréal, Canada**
 Neurophysiology/Neural Computation Stream

HONOURS AND AWARDS

2021-2023 **Postdoctoral Fellowship for Academic Diversity, Kavli Institute for Neuroscience**
 Amount awarded: \$130,000 USD

2020 **Graduate Student Award, Cognitive Neuroscience Society**
 Amount awarded: \$100 USD

GRANTS

Pending **Young Investigator Grant, Brain and Behaviour Research Foundation**
Shared and unique imaging signatures of anxiety and depression in males and females
 Role: PI
 Amount requested: \$70,000 USD

PEER-REVIEWED PUBLICATIONS

1. **Dhamala E**, Ooi LQR, Chen J, Kong R, Anderson KM, Yeo BTT, Holmes AJ. 2022. Proportional intracranial volume correction differentially biases behavioral predictions across neuroanatomical features and populations. *NeuroImage*, 260C.
 PMID: 35843514 | DOI: 10.1016/j.neuroimage.2022.119485
2. **Dhamala E**, Jamison KW, Jaywant A, Kuceyeski A. 2022. Shared functional connections within and between cortical networks predict individual cognitive abilities in males and females. *Human brain mapping*, 43(3), pp.1087-1102.
 PMID: 34811849 | DOI: 10.1002/hbm.25709
3. **Dhamala E**, Jamison KW, Jaywant A, [†]Dennis S, Kuceyeski A. 2021. Distinct functional and structural connections predict crystallised and fluid cognition in healthy adults. *Human brain mapping*, 42(10), pp.3102-3118.
 PMID: 33830577 | DOI: 10.1002/hbm.25420
4. Cha J, Speaker S, Hu B, Altinay M, Koirala P, Karne H, Spielberg J, Kuceyeski A, **Dhamala E**, Anand A. 2021. Neuroimaging correlates of emotional response-inhibition discriminate between young depressed adults with and without sub-threshold bipolar symptoms (Emotional Response-

inhibition in Young Depressed Adults). *Journal of affective disorders*, 281, pp.303-311.

PMID: 33341013 | DOI: 10.1016/j.jad.2020.12.037

5. **Dhamala E**, Jamison KW, Sabuncu MR, Kuceyeski A. 2020. Sex classification using long-range temporal dependence of resting-state functional MRI time series. *Human brain mapping*, 41(13), pp.3567-3579.

PMID: 32627300 | DOI: 10.1002/hbm.25030

6. **Dhamala E**, Abdelkefi I, Nguyen M, Hennessy TJ, Nadeau H, Near J. 2019. Validation of in vivo MRS measures of metabolite concentrations in the human brain. *NMR in Biomedicine*, 32(3), p.e4058.

PMID: 30663818 | DOI: 10.1002/nbm.4058

Top 10% most downloaded papers in NMR in Biomedicine 2018-2019.

PRE-PRINTS AND MANUSCRIPTS IN PREPARATION

* denotes equal contributions. † denotes mentee co-author.

1. Ooi LQR, Chen J, Shaoshi Z, Kong R, Tam A, Li J, **Dhamala E**, Zhou JH, Holmes AJ, Yeo BTT. (In revision). Comparison of individualized behavioral predictions across anatomical, diffusion and functional connectivity MRI. *BioRxiv preprint*.
DOI: 10.1101/2022.03.08.483564
2. **Dhamala E**, BTT Yeo, Holmes AJ. (In revision). One Size Does Not Fit All: Methodological Considerations for Predictive Modelling in Psychiatry.
3. *Ricard JA, *Parker TC, **Dhamala E**, Kwasa J, Allsop AS, Holmes AJ. (In revision). Confronting racially exclusionary practices in the acquisition and analyses of neuroimaging data.
4. Chopra S, Labache L, **Dhamala E**, Orchard ER, Holmes AJ. (In preparation). Reproducible and Programmatic Generation of Neuroimaging Visualizations.
GitHub Preprint: <https://github.com/sidchop/RepoNeuroVis/blob/main/manuscript.pdf>.
5. *†Bukhari H, *Su C, **Dhamala E**, Gu Z, Jamison KW, *Fan Z, *Kuceyeski A. (In preparation). Graph-matching based metric of functional connectome distance varies with age, sex, and relatedness.

TEXTBOOK CHAPTERS

1. Thompson JW, Kosofsky B, **Dhamala E**, Duggan, R. 2020. Electrophysiology monitoring. *Biomarkers for Traumatic Brain Injury*, pp.113-142.
ISBN: 9780128163467

PRESENTATIONS: POSTERS, TALKS, SYMPOSIA

* denotes equal contributions. † denotes mentee co-author.

1. **Dhamala E**, Holmes AJ. Psychiatric neuroimaging: methods and applications. Oral Session Chair. *Organization for Human Brain Mapping*. June 2022; Glasgow, UK.
2. **Dhamala E**, Calhoun VD. Multivariate approaches: from methods to applications. Oral Session Chair. *Organization for Human Brain Mapping*. June 2022; Glasgow, UK.
3. **Dhamala E**, Ooi LQR, Chen J, Kong R, Anderson KM, Yeo BTT, Holmes AJ. Intracranial volume correction differentially biases brain-behavior predictions across populations. Poster. *Organization for Human Brain Mapping*. June 2022; Glasgow, UK.
4. **Dhamala E**, Holmes AJ, Chen J, Li J, Keller A. Machine learning in neuroimaging: from application to interpretation. Symposium Chair & Presenter. *Organization for Human Brain Mapping*. June 2022; Glasgow, UK.

5. Wu E, Olafson E, **Dhamala E**, Pritschet L, Santander T, Jacobs E, Kuceyeski A. Estradiol and progesterone relate to brain state dynamics. Poster. *Organization for Human Brain Mapping*. June 2022; Glasgow, UK.
6. †Bukhari H, Su C, **Dhamala E**, Gu Z, Jamison KW, *Fan Z, *Kuceyeski A. A novel graph matching-based metric of the human connectome varies with age and sex. Poster. *Organization for Human Brain Mapping*. June 2022; Glasgow, UK.
7. **Dhamala E**, Ooi LQR, Chen J, Kong R, Anderson KM, Yeo BTT, Holmes AJ. Intracranial volume correction differentially biases behavioral predictions across neuroanatomical features and populations. Poster. *Society for Biological Psychiatry*. April 2022; New Orleans, USA.
8. Holmes AJ, Uddin LQ, **Dhamala E**, Bzdok D, Yip S. The future of psychiatry: promises and pitfalls in the use of big data. Symposium Presenter. *Society for Biological Psychiatry*. April 2022; New Orleans, USA.
9. **Dhamala E**, Kong R, Anderson KM, Ooi LQR, Chen J, Yeo BTT, Holmes AJ. Anatomical properties of individual-specific areal-level parcellations predict cognition and behaviour. Poster. *Society for Neuroscience*; November 2021; Virtual due to COVID-19.
10. **Dhamala E**. Modelling and Analysis - Connectivity. Poster Session Moderator. *Organization for Human Brain Mapping*; June 2021; Virtual due to COVID-19.
11. **Dhamala E**. Higher Cognitive Function. Poster Session Moderator. *Organization for Human Brain Mapping*; June 2021; Virtual due to COVID-19.
12. **Dhamala E**, Jamison KW, Jaywant, A, Kuceyeski A. Shared functional connectivity features predict individual cognitive abilities in males and females. Poster. *Organization for Human Brain Mapping*; June 2021; Virtual due to COVID-19. *Featured in the Modelling and Analysis - Multivariate Approaches session*.
13. †Wu E, **Dhamala E**, Pritschet L, Santander T, Jacobs E, Kuceyeski A. Increased sex hormones are associated with increased segregation of functional connectivity networks. Poster. *Organization for Human Brain Mapping*; June 2021; Virtual due to COVID-19. *Featured in the Social Neuroscience, Emotion, and Motivation session*.
14. †Cai C, **Dhamala E**, Pritschet L, Santander T, Jacobs E, Kuceyeski A. Fluctuations in estradiol and progesterone are not related to high amplitude co-fluctuations in fMRI. Poster. *Organization for Human Brain Mapping*; June 2021; Virtual due to COVID-19.
15. **Dhamala E**, Jamison KW, Jaywant A, Kuceyeski A. Shared functional connectivity features underlie cognitive abilities in males and females. Oral Presentation. *Weill Cornell Medicine, Vincent du Vigneaud Research Symposium*; April 2021; Virtual due to COVID-19.
16. **Dhamala E**, Jamison KW, †Dennis SM, Patel R, Chakravarty MM, Kuceyeski A. Hybrid structure-function connectome predicts individual cognitive abilities. Oral power pitch. *International Society of Magnetic Resonance in Medicine*; August 2020; Virtual due to COVID-19.
17. **Dhamala E** and Khosla M. Machine Learning in Neuroimaging. Breakout session leaders: Women in Machine Learning Un-Workshop. *International Conference on Machine Learning*. July 2020; Virtual due to COVID-19.
18. **Dhamala E**, Jamison KW, †Dennis SM, Patel R, Chakravarty MM, Kuceyeski A. Integration of structural and functional connectomes to predict individual cognitive abilities. Poster. *Organization for Human Brain Mapping*; June 2020; Virtual due to COVID-19.
19. Simon A, Jamison KW, Tozlu C, **Dhamala E**, Gauthier S, Kuceyeski A. Temporal memory of resting-state fMRI time series activations are able to classify multiple sclerosis. Poster. *Organization for Human Brain Mapping*; June 2020; Virtual due to COVID-19.
20. **Dhamala E**, Jamison KW, Kuceyeski A. Hybrid structure-function connectome predicts sex. Poster. *Organization for the Study of Sex Differences*; Cancelled due to COVID-19.

21. **Dhamala E**, Jamison KW, †Dennis SM, Patel R, Chakravarty MM, Kuceyeski A. Hybrid-structure-function connectome predicts crystallised and fluid cognition. Poster. *Cognitive Neuroscience Society*; May 2020; Virtual due to COVID-19.
22. **Dhamala E**, Jamison KW, †Dennis SM, Kuceyeski A. Prediction of individual cognitive ability using resting-state functional connectivity. Poster. *Society for Neuroscience*; October 2019; Chicago, USA.
23. **Dhamala E**, Jamison KW, Kuceyeski A. Sex differences in long-term temporal dependence of resting state fMRI time series. Poster. *Organization for Human Brain Mapping*; June 2019; Rome, Italy.
24. Duggan RC, **Dhamala E**, Kosofsky BE. Heart rate variability during exercise is a biomarker distinguishing between subjects with post-concussive syndrome following mild traumatic brain injury and healthy volunteers. Poster. *Society for Neuroscience*; November 2018; San Diego, USA.
25. Kassinopoulos M, Ghosh A, **Dhamala E**, Boudrias MH, Mitsis G. Cardiac noise removal from BOLD fMRI based on a dynamic linear model. Poster. *Organization for Human Brain Mapping*; June 2017; Vancouver, Canada.

INVITED RESEARCH TALKS

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| 2022 | Open Science Sciencepalooza
University of South Carolina, Columbia, USA |
| 2021 | Yale Imaging and Psychopharmacology Lab
Yale University, New Haven, USA |
| 2021 | Cognitive Neuroscience Seminar
Yale University, New Haven, USA |
| 2021 | Brain Health Imaging Institute Seminar Series
Weill Cornell Medicine, New York, USA |
| 2020 | Centre d'Imagerie Cérébrale Lecture Series
Douglas Mental Health University Institute, Montréal, Canada |
| 2020 | Cognitive Neuroscience Seminar
Yale University, New Haven, USA |
| 2020 | Rajah Lab
Douglas Mental Health University Institute, Montréal, Canada |
| 2020 | Jacobs Lab
University of California Santa Barbara, Santa Barbara, USA |
| 2020 | Early Career BIPOC Scholars Neuropsychology Lecture Series
Ohio State University, Columbus, USA |
| 2020 | Frontiers in Neuropsychiatry Seminar
Weill Cornell Medicine, New York, USA |
| 2020 | Progress in Neuroscience Seminar
Weill Cornell Medicine, New York, USA |
| 2019 | Matteson Lab
Cornell University, Ithaca, USA |
| 2019 | Psychiatric and Developmental Imaging Lab
University of Pennsylvania, Philadelphia, USA |

INVITED PANELS

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| 2022 | Neurathon Neuroscience Workshop Series: Science Communication
Simply Neuroscience, Virtual |
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- 2022 From ACE to Home Base: Alumni Panel on Preparing for Career Paths Post PhD
Weill Cornell Medicine, New York, USA
- 2021 Building Allyship Series: Understanding and Combating Anti-Asian Racism
Cornell University, Ithaca, USA
- 2021 Open Science Room Emergent Sessions: Challenges with Different Meeting Formats
Organization for Human Brain Mapping Annual Conference, Virtual
- 2021 BrainHack: Data Visualisation and Machine Learning
Organization for Human Brain Mapping Annual Conference, Virtual
- 2020 Building Allyship Series: Dangers of Performative Allyship
Cornell University, Ithaca, USA

TEACHING

- 2020-2021 **Instructor, HD 2200 Human Brain and Mind** (Enrolment: ~15 per semester)
Spring 2020: Auburn Correctional Facility
Fall 2021: Cayuga Correctional Facility
Spring 2021: Five Points Correctional Facility
Cornell University - Cornell Prison Education Program

MENTORING**Yale University**

- 2022 Emily Berkeley (summer undergraduate research fellow mentor)

Weill Cornell Medicine

- 2021-2022 Hussain Bukhari (graduate rotation student mentor)

Cornell University

- 2020-2021 Catherine Cai, Elaine Wu (undergraduate research mentor)
2020-2021 Saanvi Somani (high school capstone project mentor)
2020 Jason Chen (undergraduate research mentor)
2019 Sarah Dennis (undergraduate research mentor)

McGill University

- 2017 Afuad Hossain (undergraduate research mentor)
2016-2017 Bennet Desormeau (undergraduate research mentor)
2016 Sharif Ahmed, Natalie Sun (undergraduate research mentor)

AD HOC REVIEWER

Communications Biology
Developmental Cognitive Neuroscience
Frontiers in Neuroscience
Heliyon IEEE Access
Human Brain Mapping
Neuroimage
PLOS ONE
Translational Psychiatry

PROFESSIONAL SERVICE**Organization for Human Brain Mapping**

- 2021-2024 Program Committee: Ad Hoc Member
2020-2021 Technology Task Force: Ad Hoc Member

2020-2021 Program Committee: Student and Postdoc Liaison
 2020-2021 Sustainability and Environmental Action Group: Social Coordinator
 2020 Distance Based Education Taskforce: Student and Postdoc Liaison
 2019-2021 Student and Postdoc Group: Social Coordinator

INSTITUTIONAL SERVICE

Yale University

2022 Yale Biomedical Sciences Diversity/Inclusion Collective: Research Symposium Judge
 2022 Brain Education Day: Leader and Mentor

Weill Cornell Medicine

2021 Machine Learning in Medicine Symposium: Organiser
 2020-2021 Machine Learning in Medicine Seminar Series: Organiser
 2020 CoCo Lab Professional Development Series: Organiser and Facilitator
 2020 Brainhack New York: Organiser
 2018-2019 Neuroscience Boot Camp : Organiser, Lecturer
 2017-2018 Vincent du Vigneaud Research Symposium: Alumni Outreach Coordinator

Cornell University

2020-2021 Graduate and Professional Students Diversity Council: Member
 2020-2021 Graduate and Professional Students International: Co-President
 2019-2020 Multicultural Academic Council: Mentor

McGill University

2015-2017 Neuroscience Undergraduates of McGill: Vice President Internal
 2015-2016 Kinesiology Games: Head of Sponsorship

OUTREACH ACTIVITIES

2022 New Haven Science Fair: Scientific Judge
 2018- Skype A Scientist: Scientist Mentor
 2018 Cornell Cooperative Extension: Student Space Experiments Program: Mentor

PROFESSIONAL DEVELOPMENT AND TRAININGS

2022 New England Future Faculty Workshop
 Northeastern University, Harvard Medical School
 2022 Scientists Teaching Science
 New York Academy of Sciences
 2022 Postdoc Series: Chalk Talk
 Kavli Institute for Neuroscience, Yale University
 2022 Creating Connections: An Introduction to the Alda Method
 Kavli Foundation
 2022 Crafting a Compelling Diversity Statement
 Yale University
 2022 Grant Writing
 Yale University
 2022 Mental Health First Aid Certification
 National Council for Mental Wellbeing
 2021 Fundamentals of Scientific Writing
 Yale University
 2021 Colman Inclusive Leadership Program

	Cornell University
2020-2021	NextGen Professor's Program Cornell University
2020	Integrating Sex and Gender to Improve Human Health National Institutes of Health: Office of Research on Women's Health
2020	Writing in the Sciences Coursera
2020	Teaching and Learning in the Diverse Classroom Cornell University
2019	Art of Scientific Writing Weill Cornell Medicine

PROFESSIONAL MEMBERSHIPS

Cognitive Neuroscience Society
Organization for Human Brain Mapping
Organization for the Study of Sex Differences
National Center for Faculty Development & Diversity
Society for Neuroscience

PRE-DOCTORAL TRAINING

2018	Weill Cornell Medicine, New York, USA Rotation Student (Advisor: Barry Kosofsky)
2017	Weill Cornell Medicine, New York, USA Rotation Student (Advisor: Olivier Elemento)
2017	Douglas Mental Health University Institute, Montréal, Canada Research Assistant (Advisor: Jamie Near)
2016-2017	McGill University Faculty of Medicine, Montréal, Canada Research Assistant (Advisor: Marie-Hélène Boudrias)
2015-2016	McGill University Faculty of Science, Montréal, Canada Research Assistant (Advisor: Maria Pompeiano)
2014-2015	McGill University Faculty of Science, Montréal, Canada Laboratory Assistant (Advisor: Rüdiger Krahe)