

KIMBERLY NESTOR | CURRICULUM VITAE

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EDUCATION

CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA Aug 2021 - May 2026 (expected)
Cognitive Neuroscience, PhD

BOSTON UNIVERSITY, MET, Boston, MA May 2020 - May 2022
Applied Data Analytics, MS

WHEATON COLLEGE, Norton, MA Aug 2013 - May 2017
Neuroscience, BA

RESEARCH EXPERIENCE

Graduate Research Assistant Aug 2021 - Present
Carnegie Mellon University, Pittsburgh, PA
Cognitive Axon Laboratory (CoAx)
Psychology Department, Dietrich College
Center for Neural Basis of Cognition
Principal Investigator: Timothy Verstynen, PhD

Research Technologist June 2017 - July 2021
Massachusetts General Hospital, Boston, MA
Athinoula A. Martinos Center for Biomedical Imaging
Laboratory for Computational Neuroimaging (LCN)
Project: *Ex vivo* Analysis of Alzheimer's Disease in the Human Brain
Principal Investigator: Jean Augustinack, PhD

Project: Computational Structural Modelling of the Human Brain
Principal Investigator: Bruce Fischl, PhD
Research Advisor: Divya Varadarajan, PhD

Undergraduate Research Assistant Jan 2016 - May 2017
Wheaton College, Noton, MA
Department of Psychology
Project: Behaviour and Neuropathology in a Schizophrenia Rat Model
Principal Investigator: Stephanie Penley, PhD

Undergraduate Research Intern

Dec 2016 - Oct 2017

Massachusetts General Hospital, Boston, MA

Athinoula A. Martinos Center for Biomedical Imaging

Laboratory for Neuropsychiatry & Neuromodulation

Project: Neurotherapeutics of Treatment Resistant Psychiatric Disorders

Principal Investigator: Joan Camprodon, MD, PhD, MPH

Research Advisor: Aura Maria Hurtado, MD

JOURNAL ARTICLES

- [J1] K. Singh, I. Indovina, J. C. Augustinack, **K. Nestor**, M. G. Garcia Gomar, J. P. Staab, and M. Bianciardi. *Probabilistic atlas of the lateral parabrachial nucleus, medial parabrachial nucleus, vestibular nuclei complex and medullary viscerosensory-motor nuclei complex in living humans from 7 Tesla MRI*. *Frontiers in Neuroscience: Brain imaging methods*, 13(1425), 2020.
- [J2] A. M. Hurtado-Puerto, **K. Nestor**, and J. Camprodon. *Safety Considerations for Cerebellar Theta-Burst Stimulation: A Critical Review*. *Clinical Therapeutics*, 42(7):1169-1190, 2020.

Submitted

- [S1] J. Oltmer*, N. Slepneva*, J. Llamas Rodriguez, D. N. Greve, E. M. Williams, R. C. Wang, N. Samantha, M. Lang-Orsini, **K. A. Nestor**, N. Fernandez-Ros, B. Fischl, M. Frosch, C. Magnain, A. J. W. van der Kouwe, J. C. Augustinack. *Quantitative and Histologically Validated Measures of the Entorhinal Subfields in Ex Vivo MRI*. *Brain*, 2021.

In Preparation

- [In1] **K. Nestor***, D. Varadarajan*, C. Magnain, R. Wang, A. Hoopes, M. P. Frosch, J. R. Polimeni, B. Fischl, and J. C. Augustinack. *Temporal neocortex layers vary uniquely between crown and fundus: examining equivolume theory* (Intended submission: Neuroimage).
- [In2] S. Penley, **K. Nestor**, and S. Threlkeld. *Effects of sex and late embryonic Methylazoxymethanol exposure on working memory*. (Intended submission: Behavioral Brain Research).
- [In3] **K. Nestor**, A. M. Hurtado-Puerto, and J. Camprodon. *Neural and cognitive changes following cerebellar TMS as treatment for psychiatric disorders*.
- [In4] *An MRI/OCT/LSM multi-modal image analysis pipeline for human cerebral cortex cell census*.

* Indicates co-first authorship

CONFERENCE POSTERS

- [P1] **K. Nestor**, K. Teeters, D. Oesterle, K. Bogen, and L. M. Orchowski. *Dating Violence Victimization and Mental Health Consequences among Community College Women*. Poster presented at the annual meeting of the New England Psychological Association, Worcester, MA, 2016.
- [P2] S. C. Penley, **K. Nestor**, and S. W. Threlkeld. *Effects of sex and late embryonic methylazoxymethanol exposure on working memory*. Society for Neuroscience, 2016.
- [P3] K. Babcock, **K. Nestor**, and S. C. Penley. *Examining Neuroanatomical and Behavioral Consequences of Methylazoxymethanol Acetate Exposure in Male and Female Rodents: A model for Schizophrenia*. Wheaton College Academic Festival, 2016.
- [P4] K. Babcock, **K. Nestor**, and S. C. Penley. *Examining Neuroanatomical and Behavioral Consequences of Methylazoxymethanol Acetate Exposure in Male and Female Rodents: A model for Schizophrenia*. Wheaton College Academic Festival, 2016.
- [P5] H. Knight, C. Coco, **K. Nestor**, L. Smiley, and S. Penley. *The Effects of Embryonic Day 17 Methylazoxymethanol Acetate Exposure on Working Memory*. NEURON Conference, Quinnipiac University, Hamden, CT, 2017.
- [P6] **K. Nestor**, C. Coco, H. Knight, L. Smiley, and S. Penley. *The Effects of E17 Gestational Application of Methylazoxymethanol Acetate on Brain and Body Weight Development in Rodents*. NEURON Conference, Quinnipiac University, Hamden, CT, 2017.
- [P7] **K. Nestor**, L. Chamberlain, and S. Penley. *Sex Differences in the Developmental Trajectory of Weight Following Teratogen Exposure in Rats*. Wheaton College Academic Festival, 2017.
- [P8] A. M. Hurtado-Puerto, A. C. Villegas, **K. Nestor**, & J. Camprodon. *Safety Considerations of Theta-Burst Transcranial Magnetic Stimulation in the Cerebellum*. Harvard Psychiatry Research Day Poster Presentation, 2017.
- [P9] A. M. Hurtado-Puerto, **K. Nestor**, and J. Camprodon. *Safety of Cerebellar Theta Burst Stimulation*. Massachusetts General Hospital Clinical Research Day, Boston, MA , 2017.
- [P10] L. Morgan., **K. Nestor**, S. Randall, B. Laughton, E. Meintjes, and A. van der Kouwe. *Validation of a Bright-Vessel Removal Algorithm to Improve Freesurfer Segmentations*. Organization for Human Brain Mapping, Singapore, 2018.
- [P11] **K. Nestor**, J. C. Augustinack, C. Magnain, R. Wang, M. Fogarty, and B. Fischl. *A histologic and quantitative analysis of cortical layer thickness in the human temporal neocortices*. Society for Neuroscience, San Diego, CA, 2018.
- [P12] L. Morgan, C. Magnain, H. Wang, A. Dalca, D. Varadarajan, J. C. Augustinack, A. van der Kouwe, M. Vera, **K. Nestor**, M. Larrabee, D. Cordero, M. Fogarty, E. Boyd, B. Diamond, A. Stevens, L. Pesce, M. Scardigli, G. Mazzamuto, V. Gavryusev, F. Castelli, L. Silvestri, I. Costantini, M. Roffilli, M. Varghese, B. Wicinski, S. Raia, J. Yang, S. Chang, I-C. A. Chen, F. S. Pavone, P. R. Hof, D. Boas, and B. Fischl. *A multi-modal image analysis pipeline for cellular typology in the framework of an MRI-based atlas coordinate system of the human cerebral cortex*. Brain Initiative Investigators Meeting,

2020.

- [P13] N. Slepneva, D. N. Greve, J. Llamas Rodriguez, J. E. Iglesias Gonzalez, **K. Nestor**, E. M. Williams, A. Van der Kouwe, B. Fischl, M. P. Frosch, and J. C. Augustinack. *Histologic Parcellation and Validation of Human Entorhinal Cortex in ex vivo MRI*. Massachusetts General Hospital Clinical Research Day, Boston, MA, 2020.
- [P14] N. Slepneva, D. N. Greve, J. Llamas Rodriguez, J. E. Iglesias Gonzalez, **K. Nestor**, A. Van der Kouwe, B. Fischl, M. P. Frosch, and J. C. Augustinack. *Histologic Parcellation and Validation of Human Entorhinal Cortex in ex vivo MRI*. Massachusetts General Hospital Scientific Advisory Committee Poster Session, Boston, MA, 2021.
- [P15] J. Mora, **K. Nestor**, A. Atzeni, J. Augustinack, D. Varadarajan, L. Morgan, A. Stevens, B. Fischl, E. I. Gonzalez, and C. Magnain. *Rapid and accurate semi-automated labeling of cortical layers in MRI using SmartInterpol*. Brain Initiative Investigators Meeting, 2021.

FUNDING AWARDED

FELLOWSHIPS

Dietrich College Scholars Fellowship

2021 - 2022

Covers 12-month stipend, tuition, and fees totalling \$79990 plus \$1,000 for conference travel

PRESENTATIONS

Invited Presentations

Fall 2020 Temporal isocortex layers vary uniquely between the crown and fundus
Laboratory Meeting, Dr. Weiwei Zhang, University of California, Riverside
Laboratory Meeting, Dr. Michael Miller, Johns Hopkins University

PROGRAMMATIC SKILLS

Python (fluent) | R (fluent) | Java (mid-level) | SQL (fluent)
Bash (mid-level) | Matlab (basic)

MENTORSHIP ROLES

Laboratory for Computational Neuroimaging Mentor Program

Oscar Segovia - Fall 2020

Martinos Center Summer Internship

Chigozirim Ifebi - Summer 2021

DIVERSITY, EQUITY AND INCLUSION

Massachusetts General Hospital

Radiology Diversity, Equity and Inclusion Committee (Research Subcommittee)

University of California, Santa Barbara

Co-Founder and Guide: Black Researchers Advancing Intelligence in Neurocomputation (BRAIN)

REFERENCES

Timothy Verstynen, PhD

Associate Professor in Psychology and Biomedical Engineering

Department of Psychology

Carnegie Mellon University

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Bruce Fischl, PhD

Professor in Radiology, Harvard Medical School

Neuroscientist, Massachusetts General Hospital

Director, Laboratory for Computational Neuroimaging

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Stephanie C. Penley, PhD

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