Thomas M. Morin

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EDUCATION

Boston University, 2017 – Present
PhD Candidate, Computational Neuroscience
Graduate Program in Neuroscience

Tufts University, 2013 – 2017
Bachelor of Science, *magna cum laude,* Thesis Honors
Cognitive & Brain Science, Computer Science
Senior Honors Thesis: *Optimizing fPET-FDG*

PUBLICATIONS

Morin, T.M., Ma, W., & Stern, C.E. Differential cortical contributions to continuous perceptual and discrete symbolic reasoning on a one-dimensional raven's progressive matrices task. (*in prep.*)

Morin, T.M., Chang, A.E., Ma, W., McGuire, J.T. & Stern, C.E. (2021). Dynamic network analysis demonstrates the formation of stable functional networks during rule learning. *Cerebral Cortex*. (*Accepted for Publication*).

Gilbert, T.M., Zurcher, N.R., Wu, C.J., Bhanot, A., Hightower, B.G., Kim, M., Albrecht, D.S., Wey, H.Y., Schroeder, F.A., Rodriguez-Thompson, A., **Morin, T.M.**, Hart, K.L., Pellegrini, A.M., Riley, M.M., Wang, C., Stufflebeam, S.M., Haggarty, S.J., Holt, D.J., Loggia, M.L., Perlis, R.H., Brown, H.E., Roffman, J.L., Hooker, J.M. (2019). PET neuroimaging reveals histone deacetylase dysregulation in schizophrenia. *The Journal of Clinical Investigation*. https://doi.org/10.1172/JCI123743

Strebl, M.G., Campbell, A., Zhao, W.N., Riley, M.M., Chindavong, P., **Morin, T.M.**, Haggarty, S.J., Wagner, F.F., Ritter, T., Hooker, J.M. (2017). HDAC6 Brain Mapping with [^{18}F]Bavarostat Enabled by a Ru-Mediated Deoxyfluorination. *ACS Central Science*. 3(9), 1006-1014 http:/dx.doi.org/ 10.1021/acscentsci.7b00274

Placzek, M.S., Zhao, W., Wey, H.Y., **Morin, T.M.**, & Hooker, J.M. (2015). PET neurochemical imaging modes. *Seminars in Nuclear Medicine*, 46(1), 20-27 http://dx.doi.org/10.1053/j.semnuclmed.2015.09.001

PRESENTED ABSTRACTS

Liapis, S.S.P., **Morin, T.M.**, McGuire, J.T., & Stern, C.E. *The dimensionality of representational space calibrates to abstract reasoning complexity.* Organization for Human Brain Mapping. 2021. (Online Meeting, Due to COVID-19) [Poster]

Morin, T.M., Ma, W., Chang, A.E., & Stern, C.E. *Dynamic functional connectivity during context-dependent rule learning*. Organization for Human Brain Mapping. 2020. (Online Meeting, Due to COVID-19) [Poster]

Morin, T.M., Moore, K.N., & Stern, C.E. *An fMRI investigation of functional network connectivity during abstract reasoning*. Cognitive Neuroscience Society Annual Meeting. 2020. (Online Meeting, Due to COVID-19). [Poster]

Morin, T.M., Chang, A.E., & Stern, C.E. *Cortical contributions to perceptual and symbolic reasoning using a one-dimensional raven's progressive matrices task.* Society for Neuroscience. 2019. Chicago, IL. [Poster]

Ma, W., **Morin, T.M.**, Chang, A.E., & Stern, C.E. *An fMRI investigation of medial prefrontal network dynamics during a context-dependent rule learning task.* Society for Neuroscience. 2019. Chicago, IL. [Poster]

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PRESENTED ABSTRACTS (Continued)

Morin, T.M. *Frontoparietal Control Network Contributions to Abstract Reasoning*. Boston University Graduate Program for Neuroscience Annual Retreat. 2019. Essex, MA. [Presentation]

Morin, T.M., Chang, A.E., & Stern, C.E. *An fMRI investigation of symbolic processing using a one-dimensional raven's progressive matrices task*. Henry I. Russek Student Achievement Day. 2019. Boston University, Boston, MA. [Poster]

Cohen, J.E., **Morin, T.M.**, & Stern, C.E. *Theta oscillations at critical junctures of overlapping mazes*. Cognitive Neuroscience Society Annual Meeting. 2018. Boston, MA. [Poster]

Morin, T.M. & Wey, H.Y. *Optimizing fPET-FDG*. Cognitive & Brain Science Senior Symposium. 2017. Tufts University, Medford, MA. [Poster]

Morin, T.M. *Branching Out: What a Tree Can Teach You About Your Brain?* Out For Undergrad Engineering Conference. 2016. Stanford University, Palo Alto, CA. [Presentation]

Morin, T.M. *Creating a Computer Simulation Tool for PET Neuroimaging*. Tufts University Undergraduate Research and Scholarship Symposium. 2016. Tufts University, Medford, MA. [Presentation]

HONORS AND AWARDS

2020	Third Prize, BU Grad. Prog. for Neuro. Interview Days Poster Session
2017	Honorable Mention, NSF Graduate Research Fellowship Program
2017	Joanne Mary Sullivan Prize, Tufts University Psychology Department
2017	Barton Term Scholar for Arts and Sciences, Tufts University
2016	SpaceX People's Choice Award, Out for Undergrad Engineering Conference
2016	Greg Ellenoff Internship Grant, Tufts University Career Center
2016	Psi Chi Honor Society, Tufts University Chapter
2013-2017	Dean's List, Tufts University (5 semesters)

TRAINING

Spring 2020 — **MIT IMPACT Program**
Fellow

2017 – — **Department of Psychological & Brain Sciences, Boston University**
Cognitive Neuroimaging Lab
PhD Student Researcher
Mentor: Chantal Stern, DPhil

2017 – 2018 — **Department of Psychological & Brain Sciences, Boston University**
Attention & Perception Neuroimaging Lab
Lab Rotation & Collaborating PhD Student
Mentor: David Somers, PhD

2015 – 2017 — **A. A. Martinos Center for Biomedical Imaging,**
Massachusetts General Hospital, Harvard Medical School
Hooker Research Group
Research Intern
Mentors: Hsiao-Ying Wey, PhD, and Jacob Hooker, PhD

2014 – 2015 — **Department of Psychology, Tufts University**
Memory and Cognition Lab
Undergraduate Research Assistant, May 2014 - May 2015
Mentor: Richard Chechile, PhD

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TEACHING

2021	**Guest Lecturer** *Neural Systems II - Cognition and Behavior (NE 742)*: Cognitive Neuroscience of Reasoning Instructor: Chantal Stern, DPhil Department of Psychological & Brain Sciences, Boston University
2018, 2020, & 2021	**Guest Lecturer** *Introduction to Cognitive and Brain Science (PSY 9):* Intro to Neuroimaging Instructor: Aniruddh Patel, PhD Department of Psychology, Tufts University
2017	**Teaching Assistant** *Introduction to Cognitive and Brain Science (PSY 9)* Instructor: Aniruddh Patel, PhD Department of Psychology, Tufts University
2016	**Tutor** *American Sign Language I, II, and III* Academic Resource Center, Tufts University

MENTORSHIP

2020-2021	Bliss Cui, *Boston University, Undergrad Neuroscience Student Org. Mentee*
2020-2021	Jiahe Nu, *Boston University Academy, High School Senior Thesis Project*
2019-2020	Roberto Luis-Fuentes, *Boston University, BME Senior Thesis Project*
2019-2020	Vincent Chang, *Boston University, BME Senior Thesis Project*
Spring 2019	Sheila Yee, *Boston University, Undergraduate Directed Study Student*
2018-2020	Weida Ma, *Boston University, Undergraduate RA, BME Senior Thesis Project*
Summer 2018	Neoreet Braha, *Boston University, Undergraduate Research Assistant*

ADDITIONAL EXPERIENCE

InGenius Prep | College Admissions Consulting
Graduate Coach, November 2020 - Present

Mentor 2.0, Big Brothers Big Sisters of Massachusetts Bay
Volunteer Mentor to a High School Student: August 2017 - August 2019

Tufts Psychology Society
Class of 2017 Representative, September 2015 - May 2017

SKILLS

Programming Languages

- "Fluent" in R, Python, MATLAB, Shell Scripting, C, C++
- Experience with HTML/CSS, Lisp

Neuroimaging Software

- FSL, Freesurfer, AFNI, PMOD
- BIDS-compatible pipelines including fmriprep and NiBetaSeries

Key Concepts

- Network science and graph-based analysis of functional connectivity data
- fMRI, PET, and EEG study design, data collection & analysis
- Implementation of kinetic models for PET neuroimaging
- Collaboration with theorists to design/test computational models of cognition