# Thomas M. Morin

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<b>2017 – 2022</b> (anticipated)	Boston University PhD Candidate, Computational Neuroscience Graduate Program in Neuroscience
2013 – 2017	Tufts University B.S., magna cum laude, Thesis Honors Cognitive & Brain Science, Computer Science

# TRAINING

2017 – Present	Department of Psychological & Brain Sciences, Boston University Cognitive Neuroimaging Lab PhD Student Researcher Mentor: Chantal Stern, DPhil
Spring 2020	MIT IMPACT Program Fellow
2017 – 2018	Department of Psychological & Brain Sciences, Boston University Attention & Perception Neuroimaging Lab Lab Rotation & Collaborating PhD Student Mentor: David Somers, PhD

Senior Honors Thesis: Optimizing fPET-FDG

# 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

## **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

### **PUBLICATIONS**

#### **FORTHCOMING**

- Morin, T.M., Moore, K.N., Isenburg, K.I., Ma, W., & Stern, C.E. Reconfiguration and activation of a frontoparietal-visual system supports abstract reasoning. (*in prep.*)
- Moore, K.N., Morin, T.M., Rosen, M.L., Somers, D.C., & Stern, C.E. Default mode precuneus and its role in long term memory-guided versus stimulus-guided attention. (*in prep.*)

#### **PUBLISHED MANUSCRIPTS**

Selected manuscript PDFs are available at <a href="https://www.tmmorin.com/work">https://www.tmmorin.com/work</a>

- 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*. https://doi.org/10.1093/cercor/bhab175
- 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 [18F]Bavarostat Enabled by a Ru-Mediated Deoxyfluorination. *ACS Central Science*. 3(9), 1006-1014 <a href="http://dx.doi.org/10.1021/acscentsci.7b00274">http://dx.doi.org/10.1021/acscentsci.7b00274</a>
- 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

### **CONFERENCE POSTERS & PRESENTATIONS**

Selected poster PDFs and presentation slides are available at <a href="https://www.tmmorin.com/work">https://www.tmmorin.com/work</a>

- Isenburg, K., **Morin, T.M.**, Rosen, M.L., Somers, D.C., & Stern, C.E. *Network interactions during long-term memory guided versus stimulus-guided attention in humans*. Society for Neuroscience. 2021. Chicago, IL. (*Accepted*) [Poster]
- 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]
- **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]

#### TEACHING

2021	Guest Lecturer, Cog. Neuro. of Reasoning, Course: Grad. Cog. & Behavior, BU
2018-2021	Guest Lecturer, Intro to Neuroimaging, Course: Intro to Cog. & Brain Sci., Tufts
2017	Teaching Assistant, Introduction to Cognitive & Brain Science, Tufts University
2016	Teaching Assistant, American Sign Language I, II, and III, Tufts University

#### **MENTORSHIP**

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

## ADDITIONAL EXPERIENCE

2021	Volunteer Editor, Application Statement Feedback Program
2020-Present	Graduate Coach, InGenius Prep   College Admissions Consulting
2017-2019	Volunteer Mentor to a High School Student, Big Brothers Big Sisters
2015-2017	Class of 2017 Representative, Tufts Psychology Society

### **SKILLS**

### PROGRAMMING LANGUAGES

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

#### **NEUROIMAGING & EXPERIMENTAL SOFTWARE**

- AFNI, FSL, Freesurfer, Conn Toolbox, PMOD
- BIDS-compatible pipelines including fmriprep and NiBetaSeries
- PsychoPy; some experience with ePrime and PsychToolbox

#### **KEY CONCEPTS**

- Cognitive neuroscience of abstract reasoning, learning, and memory
- Network science and graph-based analyses of functional connectivity data
- Kinetic modeling and analysis of functional PET neuroimaging data
- fMRI and PET study design, data collection, and analysis