

## Education

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2027	<b>McGovern Medical School, Houston, TX</b> Medical Scientist Training Program	MD
2025	<b>University of Texas at Houston, Houston, TX</b> Neuroscience, advisor: Valentin Dragoi	PhD
2017	<b>Johns Hopkins University, Baltimore, MD</b> Post-Baccalaureate Premedical Program	
2014	<b>Swarthmore College, Swarthmore, PA</b> With high honors in philosophy and linguistics	BA
2013	<b>University of Oxford, Oxford, UK</b> Study abroad: philosophy of mind	

## Work

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2021 – Now	<b>Graduate Research Assistant, Dragoi Lab</b> McGovern Medical School, <i>Houston, TX</i> Investigate how neural circuits process visual information <ul style="list-style-type: none"><li>• Implement new machine learning algorithm generating optimal stimuli for neurons in visual cortex</li><li>• Develop novel applications to laminar layers, surround and synchrony</li></ul>
2016 - 2019	<b>Research Assistant, Marvel Lab</b> Johns Hopkins Medical School, <i>Baltimore, MD</i> Studied how the cerebellum contributes to cognition <ul style="list-style-type: none"><li>• Designed new cognitive tasks to examine visuospatial skills, gestalt processing, implicit sequence learning and verbal encoding</li><li>• Administered cognitive tasks, emotional questionnaires and motor tests</li></ul>

## Publications

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- M. Joyce, P. Nadkarni, S. Kronemer, [...], **M. Slapik**, et. al. (2022). "Quality of life changes following the onset of cerebellar ataxia: Symptoms and concerns self-reported by ataxia patients and informants." *Cerebellum*.
- O. Morgan., **M. Slapik**, K. Iannuzzelli, et. al. (2020). "The Cerebellum and Sequencing in Motor and Cognitive Domains: Evidence from Cerebellar Ataxia." *Cerebellum*.
- S. Kronemer, **M. Slapik**, J. Pietrowski, et. al. (2020). "Neuropsychiatric Symptoms as a Reliable Phenomenology of Cerebellar Ataxia." *Cerebellum*.

M. Slapik, S. I. Kronemer, O. Morgan, et. al. (2018). "Visuospatial Organization and Recall in Cerebellar Ataxia." Cerebellum.

## Presentations

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### Talks

- M. Slapik, Andrei, S. Khan, et al. (2022). "Optimal Stimuli as a New Method to Investigate Neural Networks." Pre-candidacy Talk at Fall Neuroscience Retreat for UTHealth. Cleveland, TX.
- O. Morgan, M. Slapik, K. Iannuzzelli, et al. (2018). "Motor and Cognitive Sequencing in Cerebellar Ataxia." Hot Chair Talk. National Ataxia Foundation's 9th Ataxia Investigators Meeting. Virtual.
- O. Morgan, M. Slapik, S. Kronemer, et al. (2018). "Motor-cognitive Multitasking in Cerebellar Ataxia." Presentation to the faculty and staff of the Johns Hopkins Ataxia Clinic, Baltimore, MD.
- M. Slapik, O. Morgan, J. Creighton, et. al. (2018). "Timing and Sequencing in Cerebellar Ataxia." Nanosymposium talk accepted for presentation at: Society for Neuroscience San Diego, CA.
- O. Morgan, J. Creighton, M. Slapik, et. al. (2018). "Neural correlates of value-driven attentional capture in addiction." Nanosymposium talk accepted for presentation at: Society for Neuroscience, San Diego, CA.
- M. Slapik, O. Morgan, C. Marvel. (2018). "Language Abilities in Cerebellar Ataxia." Presentation to the faculty and staff of the Johns Hopkins Ataxia Clinic, Baltimore, MD.
- M. Slapik, S. Kronemer, O. Morgan, et. al. (2017). "Visuospatial Organization and Recall in Cerebellar Ataxia." Talk presented at: Sensorimotor Day, Johns Hopkins University, Baltimore, MD.

### Posters

- S. Egranov, R. Milton, M. Slapik, et al. (2023). "Influence of Intracortical Microstimulation on Synaptic Efficacy between Visual and Executive Cortical Areas in Macaques." Washington, D.C.
- S. Khan, A. Andrei, M. Slapik, et al. (2023). "Optogenetic Control of Inhibitory Neurons in Macaque Visual Cortex. Washington, D.C.
- M. Slapik, A. Andrei, S. Khan, et al. (2023). "A Deep Learning Approach to Naturalistic Surround Modulation." Society for Neuroscience. Washington, D.C.
- S. Khan, A. Andrei, M. Slapik, et. al (2023). "Inhibitory Control of Up and Down Cortical States during Sleep." Spring Neuroscience Retreat for UTHealth, Houston, TX.
- M. Slapik, A. Andrei, S. Khan, et al. (2022). "Deep Networks Design Optimal Stimuli for Early Visual Cortex." Society for Neuroscience. San Diego, CA.
- M. Slapik, S. Patwardhan, R. Costa, et al. (2020). "Using Machine Learning To Classify Feeding Behavior in Aplysia." American Physician Scientists Association. Houston, TX.

- O. Morgan, **M. Slapik**, S. Kronemer, et al. (2019). "Motor-Cognitive Multitasking in Machado-Joseph's Disease." The International MJD Research Conference, Washington, DC.
- E. Hill, **M. Slapik**, O. Morgan, et al. (2018). "Abstract Thinking in Cerebellar Ataxia." Poster at: Iowa Neuroscience Institute Workshop, Cerebellum in Bipolar Disorder and Other Neuropsychiatric Diseases, Iowa City, IA.
- C. Marvel, J. Creighton, O. Morgan, **M. Slapik**, et al. (2018). "Cerebro-Cerebellar Contributions to Working Memory in Early Lyme Disease." International Society of Behavioral Neuroscience, Anchorage, AK.
- O. Morgan, **M. Slapik**, S. Kronemer, et al. (2018). "Motor-cognitive Multitasking in Cerebellar Ataxia." The National Ataxia Foundation's 8<sup>th</sup> Ataxia Investigator's Meeting, Philadelphia, PA.
- M. Slapik**, J. Pietrowski, O. P. Morgan, et al. (2018). "A Characterization of Language Impairment in Cerebellar Ataxia." The National Ataxia Foundation's 8<sup>th</sup> Ataxia Investigator's Meeting. Philadelphia, PA.
- C. Marvel, J. Creighton, O. Morgan, **M. Slapik**, et al. (2018). "Cerebro-Cerebellar Contributions to Working Memory in Early Lyme Disease." Society for Neuroscience, San Diego, CA.
- M. Slapik**, S. Kronemser, J. Mandel, et al. (2017). "Visuospatial Processing and Strategy Formation in Cerebellar Ataxia." Society for Neuroscience, Washington, D.C.

## Volunteering

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| 2021 – Now  | <b>Volunteer Counselor</b><br>Crisis Text Line, <i>Houston, TX</i> <ul style="list-style-type: none"> <li>• Support callers on the crisis line going through thoughts of suicide, self-harm, and other emotional crises</li> <li>• Undergo extensive training on therapy techniques like active listening and lack of judgement</li> </ul>                           |
| 2021 – Now  | <b>Shadowing, Department of Psychiatry</b><br>UTHealth, <i>Houston, TX</i> <ul style="list-style-type: none"> <li>• Shadow psychiatrists and residents treating a variety of psychiatric disorders in an inpatient psychiatry ward</li> </ul>  |
| 2017 – 2019 | <b>Team Leader, Health Resource Coordinator</b><br>Charm City Clinic, <i>Baltimore, MD</i> <ul style="list-style-type: none"> <li>• Assist clients with wide range of social issues, including medical treatment, insurance, employment, and housing</li> <li>• Led a small team of other volunteers and advised them on how to best assist their clients</li> </ul> |

- 2016 – 2019    **Shadowing, Parkinson's Neuropsychiatric Clinic**  
 Johns Hopkins Medicine, *Baltimore, MD*
- Shadowed a psychiatrist specializing in Parkinson's patients, addressing medication management, quality of life and psychiatric symptoms
- 2015 – 2016    **Emergency Room Volunteer**  
 Penn Presbyterian Medical Center, *Philadelphia, PA*
- Took incoming calls, paged nurses, restocked supplies, and observed procedures
- 2015 – 2016    **Front-Desk Volunteer**  
 Washington West Project, *Philadelphia, PA*
- Enrolled patients for STD and HIV screening and counseling

## Awards

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- 2023            **Ruth L. Kirschstein National Research Service Award (F30)**  
 National Institute of Health / National Eye Institute
- 2023            **Best Work-In-Progress Talk**  
 Department of Neurobiology and Anatomy, McGovern Medical School
- 2022            **Clinical and Translational Science Predoctoral Fellowship (TL1)**  
 Center for Clinical & Translational Sciences, McGovern Medical School
- 2022            **Dee S. and Patricia Osborne Endowed Scholarship in the Neurosciences**  
 Department of Neurobiology and Anatomy, McGovern Medical School
- 2022            **Travel Awards** for Society for Neuroscience in San Diego, CA  
 McGovern Medical School
- 2018            **Travel Award** for 8<sup>th</sup> Annual Ataxia Investigator's Meeting  
 The National Ataxia Foundation
- 2014            **High Honors** in Philosophy and Linguistics  
 Swarthmore College Honors Program
- 2009            **National Merit Semifinalist**  
 National Merit Scholarship Program

## Certifications

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- 2023            **Machine Learning Specialization**  
 Stanford University (Coursera)
- 2023            **Deep Learning Specialization**  
 deeplearning.ai (Coursera)

2023

AI for Medicine Specialization  
deeplearning.ai (Coursera)

## Organizations

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2017 - Now      Society for Neuroscience

2017 - 2019      National Ataxia Foundation

## Skills

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**Electrophysiology:** Acute and chronic recording

**MRI:** Structural scans

**Eye-Tracking:** Eyelink

**Data analysis:** Matlab, Python, SPSS

**Machine Learning:** Matlab, Python

**Task Development:** E-Prime, PsychToolbox

## Languages

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**English:** Fluent

**Spanish:** Basic

## Hobbies

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**Jazz Saxophone**

Bayou City Funk, The Chirp Chirps

**Machine Learning Journal Club**

Leadership Committee

**Classical and Jazz Piano**