

# KRISTINE HOCKER

## Neuroscience Research Assistant

@ khocker@uchicago.edu

### EDUCATION

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2022 **Massachusetts Institute of Technology**, B.S. in Brain and Cognitive Sciences. Concentration in Philosophy.  
GPA 4.9/5.0

### RESEARCH EXPERIENCE

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| <p>December 2020<br/>October 2019</p> | <p><b>Undergraduate Researcher, SaxeLab : Social Cognitive Neuroscience Laboratory, MIT</b></p> <ul style="list-style-type: none"><li>● Assisted functional near infrared spectroscopy (fNIRS) experiments with infants. Assembled the fNIRS cap, set up the stimuli, interacted with subjects and their caregivers, and recorded looking behavior during trials.</li><li>● Coded looking behavior from fNIRS and preferential looking experiments using Datavyu.</li><li>● Created and ran a study on Lookit, an online lab where families can participate in developmental research. The study supplemented advisor's research on how infants use imitation cues to understand social relationships. Wrote a pre-registration to submit on Open Science Framework (OSF). Created the experiment on Lookit using JSON and made changes to the study based on peer reviews. Collected data from about 30 subjects, coded their looking behavior, and analyzed the results.</li><li>● Attended and presented at the lab's journal club.</li></ul> |
| <p>August 2017<br/>June 2017</p>      | <p><b>Research Assistant, Stack Lab, Harper Cancer Research Institute, University of Notre Dame</b></p> <p>Worked on research project investigating how factors of the host, specifically age and obesity, influenced the metastasis of ovarian cancer. Learned a range of wet lab skills :</p> <ul style="list-style-type: none"><li>● Mouse tail type I collagen isolation, purification and optimization;</li><li>● Protein concentration assays, protein gel electrophoresis, coomassie blue staining, gel imaging;</li><li>● Collagen invasion assays with ovarian cancer cells, Diff-quick staining of the chambers, photography and quantitation of successively invaded cells;</li><li>● Immunohistochemistry of mouse normal and tumor tissue with multiple antibodies related to ovarian cancer;</li><li>● Slide scanning, photographing of IHC stained tissues, utilization of Aperio Imagescope software to obtain quantitation of staining intensity, and statistical analysis of results.</li></ul>                                |

### RESEARCH INTERESTS

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- Neuroimaging : Using neuroimaging methods, such as fMRI, to map the human brain  
Neuroethics : Understanding the ethical implications of neuroscience  
Open Science : Increasing the accessibility and reproducibility of research

## TEACHING EXPERIENCE

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Spring 2022,  
2021, 2020

### Teaching Assistant, Intro to Psychological Science, MIT Department of Brain and Cognitive Sciences

- Teaching assistant for the Intro to Psychological Science class. Topics included mental and neural bases of perception, emotion, learning, memory, cognition, child development, personality, psychopathology, and social interaction.
- Taught a weekly one hour recitation which reviewed lecture and textbook material and facilitated discussion questions.
- Prepared recitation material for weekly TA meetings, wrote exam questions, and provided feedback on and graded papers.
- Received Angus MacDonald Award for Excellence in Undergraduate Teaching.
- Overall rating : 6.9/7.0.

## LEADERSHIP EXPERIENCE

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February 2022  
February 2020

### Hall Chair, East Campus, Dorm Government

- Hall chair in East Campus dorm government. Represented hall members in dorm decisions, handled hall budgetary items, and resolved interpersonal conflict. Lead extensive hiring process for hall graduate resident advisor.

## AWARDS

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### Angus MacDonald Award for Excellence in Undergraduate Teaching

2022

Nominated by Professor John Gabrieli and Course Coordinator Laura Frawley for role as teaching assistant in 9.00 Introduction to Psychological Sciences.

### Department of Brain and Cognitive Sciences Research Award

2021

Nominated by Professor Rebecca Saxe for work done as undergraduate researcher in the SaxeLab.

### Department of Brain and Cognitive Sciences Academic Award

2022, 2021, 2020

Awarded to students who earned a cumulative 4.9 GPA or higher.

## SKILLS

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**Computer** Python, MATLAB