

# Madison Fansher

PhD Candidate, Psychology  
Cognition and Cognitive Neuroscience  
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University of Michigan  
530 Church St.  
Ann Arbor, MI, 48109

## Education

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### University of Michigan (Ann Arbor, MI)

<i>PhD, Psychology</i>	2023 (expected)
<i>Master of Science, Psychology</i>	2021
<i>Certificate, Cognitive Science</i>	2021

### Purdue University (West Lafayette, IN)

<i>Bachelor of Science, Brain and Behavioral Sciences</i>	2018
with Research-Focused Honors	

## Academic Research Positions

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<b>The International Max Planck Research School on the Life Course (LIFE)</b>	2021 – present
<i>Fellow</i>	

<b>National Science Foundation</b>	2020 – present
<i>Graduate Research Fellow</i>	

<b>Basic and Applied Cognition Lab, University of Michigan</b>	2018 – present
<i>Graduate Student Research Assistant</i>	
<i>PI: Dr. Priti Shah</i>	

<b>Center for Academic Innovation, University of Michigan</b>	2019
<i>Behavioral Science Fellow</i>	

<b>Purdue College of Education Research Training Program</b>	2017 – 2018
<i>Undergraduate Researcher</i>	

<b>User Experience Pedagogy and Practice Lab</b>	2017 – 2018
<i>NSF Research Experience for Undergrads (REU)</i>	

<b>Purdue Lab for Computational Cognitive Neuroscience</b>	2016 – 2018
<i>Undergraduate RA</i>	
<i>NSF Research Experience for Undergrads (REU) (2016 – 2017)</i>	
<i>PI: Dr. Sebastien Hélie</i>	

<b>Purdue Applied Cognition Lab</b>	2016 – 2018
<i>Undergraduate RA</i>	
<i>PI: Dr. Thomas Redick</i>	

## Honors and Awards

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<b>John Swets Memorial Award (\$25,000)</b>	April 2021
<i>Awarded to research team to study cognitive dysfunction in people with a previous diagnosis of COVID-19</i>	
<b>ICPSR Summer Training Award</b>	April 2021
<i>Provided funding to take a summer course on Bayesian data analysis</i>	
<b>Rackham Graduate Student Research Grant (\$1,500)</b>	June 2020
<i>Awarded grant to study internal and external representations of problem spaces</i>	
<b>National Science Foundation Graduate Research Fellowship (\$138,000)</b>	April 2020
<i>Awarded stipend and tuition/fees for three years of graduate study</i>	
<b>Rackham Graduate Student Travel Grant</b>	June 2019
<b>Weinberg Institute for Cognitive Science Award</b>	March 2018
<b>Undergraduate Research Travel Grant, Purdue University</b>	October 2017
<b>Undergraduate Research Grant, Purdue University (\$800)</b>	September 2017
<b>Purdue Psychology Undergraduate Research Conference</b>	April 2017, 2018
<i>Second Place Award for Poster Presentation</i>	

## Manuscripts

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### In preparation.

- Fansher, M.**, Michal, A., & Shah, P. (in preparation). Identifying experimental confounds from sampling and selection errors.
- Fansher, M.**, Lalwani, P., ... & Jonides, J. (in preparation). A video intervention approach to teaching people how to "flatten the curve".
- Quirk, M., **Fansher, M.**, ... Jonides, J. (in preparation). How individual differences and misestimation of exponential growth inform our knowledge of threat sensitivity to COVID-19.
- Lim, L.X., **Fansher, M.**, Redick, T.S., & Helie, S. (in preparation). Individual differences in executive functions predict categorization system-switching

### Under Review.

- Lim, L.X., **Fansher, M.**, & Hélie, S. (under review). Do cognitive and motor effort costs affect choice behavior similarly?
- Fansher, M.**<sup>†</sup>, Adkins, T.J.<sup>†</sup>, ... & Jonides, J. (under review). How ordinary Americans understand COVID-19. *Memory and Cognition*. [Preprint](#)
- Lalwani, P., **Fansher, M.**, ... & Jonides, J. (under review). Misunderstanding "Flattening the Curve". *Psychological Science*. [Preprint](#)
- Fansher, M.**<sup>†</sup>, Adkins, T.J.<sup>†</sup>, ... Jonides, J. (under review). Icon Arrays Reduce Concern Over COVID-19 Vaccine Side Effects. *Cognitive Research: Principles and Implications*. [Preprint](#)

## Publications.

- Fansher, M.,** Shah, P., & Hélie, S. (in press). Internal representation supports complex problem solving. *Cognition*
- Fansher, M.,** Adkins, T.J., & Shah, P. (in press). No effect of the presence of graphs on evidence evaluation. *Journal of Experimental Psychology: Applied*.
- Michal, A., **Fansher, M.,** Sun, X., Zhang, H., & Shah, P. (in press). Cognitive development: Applications to education. In *the Handbook of Educational Psychology*.
- Endres, M., **Fansher, M.,** Shah, P., and Weimer, W. To read or to rotate? Comparing the effects of technical reading training and spatial skills training on novice programming ability. In *ESEC/FSE 2021 Research Papers*. [Link](#)
- Fansher, M.,** Chivukula, S. S., & Gray, C. M. (2018). #darkpatterns: UX Practitioner Conversations About Ethical Design. In *CHI EA '18: CHI'18 Extended Abstracts on Human Factors in Computing Systems*. New York, NY: ACM Press. [Link](#)
- Hélie, S., & **Fansher, M.** (2018). Categorization system-switching deficits in typical aging and Parkinson's disease. *Neuropsychology*, 32(6), 724-634. [Link](#)

## Conference Presentations

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- Fansher, M.,** Adkins, T.J., ... Jonides, J. (November 2021). "Icon Arrays Reduce Concern Over COVID-19 Side Effects". *Harvard Women in Psychology's Annual Trends in Psychology Summit (TiPS)*. Virtual.
- Lim, L.X., **Fansher, M.,** & Hélie, S. (November 2021). "Cognitive and Physical Effort-Based Decision-Making: Comparing Effort Discounting in Choice Selection". 62<sup>nd</sup> annual meeting of the *Psychonomic Society*. Virtual.
- Fansher, M.,** Lalwani, P., ... & Shah, P. (November 2021). "Flatten What Curve? Helping People Make Sense of COVID-19 Graphs when Public Health Messaging Fails". 62<sup>nd</sup> annual meeting of the *Psychonomic Society*. Virtual.
- Quirk, M., Jonides, J., **Fansher, M.,** Lalwani, P., Adkins, T.J., Shah, P., & Lewis, R.L. (November 2021). "Conservatives and Liberals Forecast Growth of COVID-19 Differently with Corresponding Social Consequences". 62<sup>nd</sup> annual meeting of the *Psychonomic Society*. Virtual.
- Fansher, M.,** Hélie, S., Shah, P. (June 2019). "The Role of Internal and External Representations in Strategy Learning in the Tower of Hanoi". 13<sup>th</sup> bi-annual meeting of the *Society for Applied Research in Memory and Cognition*, Cape Cod, MA.
- Hélie, S., Shamloo, F., **Fansher, M.,** Ell, S.W. (March 2019). "Using fMRI to Explore the Effects of Task Instructions and Response Strategy". *Nineteenth Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.
- Fansher, M.,** & Hélie, S. (April 2018). "The Role of Internal and External Representations in Strategy Acquisition". *Sixteenth annual Purdue Psychology Undergraduate Research Conference*, West Lafayette, IN.

- Fansher, M.,** Chivukula, S.S., & Gray, C.M. (April 2018). "Capturing UX Practitioner Conversations About Ethical Design on Twitter". *Annual Purdue Undergraduate Research Conference*, West Lafayette, IN.
- Fansher, M.,** & Hélie, S. (March 2018). "Strategy Learning in Distributed Cognitive Tasks: Do External Representations Promote Passive Problem Solving?" *Annual Graduate Student Educational Research Symposium*, West Lafayette, IN.
- Hélie, S., **Fansher M.** (November 2017). "Categorization System–Switching Deficits in Typical Aging and Parkinson's Disease". *Annual Psychonomic Society Conference*, Vancouver, BC. Fansher, M., Redick, T.S., & Hélie, S. (June 2017). "Categorization System Switching: The Role of Individual Differences in Executive Function". *Annual Midwest Cognitive Science Conference*, Oxford, OH.
- Taylor, J. Shamloo, F., **Fansher, M.,** Ell, S.W., & Hélie, S. (June 2017). "The Impact of Training Methodology on the Formation of New Categories from Existing Knowledge". *Annual Midwest Cognitive Science Conference*, Oxford, OH.
- Fansher, M.,** & Hélie, S. (April 2017). "The Effects of Aging and Parkinson's Disease on Trial-by- Trial Switching Between Categorization Systems". *Annual Purdue Psychology Undergraduate Research Conference*, West Lafayette, IN.
- Fansher, M.,** & Hélie, S. (April 2017). "The Effects of Aging and Parkinson's Disease on Trial-by- Trial Switching Between Categorization Systems". *Annual Purdue Undergraduate Research Conference*, West Lafayette, IN.

## Presentations

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- Scientific reasoning and COVID-19. *Flipped Science Fair, University of Michigan*, April 2021.
- How ordinary Americans forecast COVID-19. *Invited Speaker for Psychology Department Staff, University of Michigan*, November 2020.
- The effects of data visualization on scientific reasoning processes. *Flipped Science Fair, University of Texas at El Paso*, August 2020.
- Blinded by Scientists? How graphical depictions of data influence scientific reasoning. *Cognition and Cognitive Neuroscience Forum, University of Michigan*, January 2020.

## Teaching Experience

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### Introduction to Cognitive Psychology, University of Michigan

Graduate Student Course Coordinator

Winter 2022

Lead Graduate Student Instructor

Winter 2020

Graduate Student Instructor

Winter, Fall 2019

### Emotion and Memory, University of Michigan

Guest Lecturer

October 2019

## Mentoring

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Michigan Association of Psychological Scholars (MAPS)	2018 -
<i>Mentor, University of Michigan, Co-Chair (2019 - present)</i>	
STAR Scholars Program, University of Michigan	2019 – 2020
<i>Mentor</i>	
Purdue Undergraduates in Psychological Research (PUPR)	2017 – 2018
<i>President and Founder, Purdue University</i>	
Peer Success Coach Program, Purdue University	2017 – 2018
<i>Peer Success Coach</i>	

## Service

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Undergraduate Research Opportunity Program (UROP) Symposium	April 2021
<i>Judge, University of Michigan</i>	
Undergraduate Research Symposium	April 2021
<i>Judge, University of Michigan</i>	
Graduate Student Panel Member, Teaching Academy	November 2020
CCN Admissions Committee	2020 – 2022
CCN Recruitment Committee	2019 – 2020
Brains Rule!	2019, 2020
Diversity Recruitment Week Volunteer	March 2019
CCN Forum Committee, University of Michigan	2018 – 2019
Undergraduate Research Fair, Organizer, Purdue University	April 2018
Community Standards Board Member, Purdue University	2015-2018

## Workshops

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“Applying for the NSF GRFP”, University of Michigan	October 2020
“Transitioning to Online Research”, University of Michigan	May 2020
“Applying to Graduate School”, University of Michigan	April 2020
“Introductory Data Analysis”, University of Michigan	April 2020
“CV Workshop”, Purdue University	March 2018

## Software and Skills

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R, ggplot, SPSS, Qualtrics, Python, PsychoPy, E-Prime, fMRI (secondary user), Eyelink 1000 Plus, Qualitative Data Analysis, Bayesian Data Analysis, Project Management, Graphic Design, Online Data Collection, Interdisciplinary Collaboration

## Reviewer Service

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Cognitive Science, Developmental Science, Psychological Bulletin