Madison Fansher

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

Education

University of Michigan (Ann Arbor, MI)
PhD, Psychology   2023 (expected)
Master of Science, Psychology   2021
Certificate, Cognitive Science   2021

Purdue University (West Lafayette, IN)
Bachelor of Science, Brain and Behavioral Sciences   2018
with Research-Focused Honors

Academic Research Positions

The International Max Planck Research School on the Life Course (LIFE)   2021 –
    Fellow
National Science Foundation   2020 –
    Graduate Research Fellow
Basic and Applied Cognition Lab, University of Michigan   2018 –
    Graduate Student Research Assistant; PI: Dr. Priti Shah
Center for Academic Innovation, University of Michigan   2019
    Behavioral Science Fellow
Purdue College of Education Research Training Program   2017 – 2018
    Undergraduate Researcher
User Experience Pedagogy and Practice Lab   2017 – 2018
    NSF Research Experience for Undergrads (REU)
Purdue Lab for Computational Cognitive Neuroscience   2016 – 2018
    Undergraduate RA; PI: Dr. Sebastien Hélie
    NSF Research Experience for Undergrads (REU) (2016 – 2017)
Purdue Applied Cognition Lab   2016 – 2018
    Undergraduate RA; PI: Dr. Thomas Redick

Honors and Awards

John Swets Memorial Award ($25,000)   April 2021
    Awarded to research team to study cognitive dysfunction in people with
    a previous diagnosis of COVID-19
ICPSR Summer Training Award   April 2021
    Provided funding to take a summer course on Bayesian data analysis
Rackham Graduate Student Research Grant ($1,500)   June 2020
    Awarded research grant to study the interaction between strategy learning and the presence of
    internal and/or external representations of problems
National Science Foundation Graduate Research Fellowship ($138,000)   April 2020
    Awarded stipend and tuition/fees for three years of graduate study
National Science Foundation ($200,000)   April 2020
    RAPID: Factors that affect understanding the risks of COVID-19 (#2027822)

PIs John Jonides
Contributed to preparation of the grant application

Rackham Graduate Student Travel Grant	June 2019
Weinberg Institute for Cognitive Science Award	March 2018
Undergraduate Research Travel Grant, Purdue University	October 2017
Undergraduate Research Grant, Purdue University ($800)	September 2017
Purdue Psychology Undergraduate Research Conference	April 2017, 2018

Second Place Award for Poster Presentation

Manuscripts

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.

Hélie, S., Lim, L.X., **Fansher, M.,** & Redick, T.S. (under review). What makes system-switching difficult? A computational model of the interaction of neurobiological circuits. *Psychological Review.*

Lim, L.X., **Fansher, M.,** & Hélie, S. (under review). Do cognitive and motor effort costs affect choice behavior similarly? *Behavior Research Methods.*

Lalwani, P., **Fansher, M.,** … & Jonides, J. (under review). Misunderstanding "Flattening the Curve". *Psychological Science.* Preprint

Michal, A., **Fansher, M.,** Sun, X., Zhang, H., & Shah, P. (in press). Cognitive development: Applications to education. In *the Handbook of Educational Psychology*.

Fansher, M.[†], Adkins, T.J.[†], … Jonides, J. (2022). Icon Arrays Reduce Concern Over COVID-19 Vaccine Side Effects. *Cognitive Research: Principles and Implications.* Link

Fansher, M., Adkins, T. J., Lewis, R. L., Boduroglu, A., Lalwani, P., Quirk, M., … & Jonides, J. (2022). How well do ordinary Americans forecast the growth of COVID-19? *Memory & Cognition*, 1-18. Link

Fansher, M., Shah, P., & Hélie, S. (2022). The effect of mode of presentation on Tower of Hanoi problem solving. *Cognition*, *224*, 105041. Link

Fansher, M., Adkins, T. J., & Shah, P. (2022). Graphs do not lead people to infer causation from correlation. *Journal of Experimental Psychology: Applied*. Advance online publication. Link

Endres, M., **Fansher, M.,** Shah, P., and Weimer, W. (2021). 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

Hélie, S., Lim, L.X., & **Fansher, M.** (June 2022). "Is Willingness to Devote Cognitive and Motor Effort a General Trait?". *The 5th Multidisciplinary Conference on Reinforcement Learning and Decision Making*, Providence, Rhode Island.

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". *62nd 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". *62nd 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". *62nd 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". *13th 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

Graphs Matter: How Visualizations of COVID-19 Data Help and Hinder Decision-Making. *Cognition and Cognitive Neuroscience Forum, University of Michigan,* April 2022.

Icon Arrays Reduce Concern Over COVID-19 Side Effects. *Patricia Gurin Distinguished Lecture Series, University of Michigan,* February 2022.

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

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 Programs

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

Undergraduate Research Mentoring

Anusha Santhapur, University of Michigan	2021 –
Honors Project: Intolerance of Uncertainty and Medical Decision-Making	
Rachel Beiter, University of Michigan	2022 –
Honors Project: The Effort Heuristic and Scientific Reasoning	
Olivia Murray, University of Michigan	2022 –
Project: Complexity of Graphs and Persuasion	
Juhi Valera, University of Michigan	2022 –
Project: Anecdotal Evidence and Scientific Reasoning: The Role of Authority	

Additional: Yiwen Zhong (PhD Student, The University of Hong Kong), Lily Johnson (MPH, Yale), Aliyah Clark, Miriam Freedman, Jiachen He, Abraham Hamadi, Jennifer Murray, Grace DesJardins, Rima Abdulrahman

Service

Executive Committee, Department of Psychology	Fall 2022 –
One of two graduate student representatives, selected out of ~150 graduate students	
Departmental Associate	Fall 2022 –

Cognition and Cognitive Neuroscience Student Representative

Department of Psychology Honors Thesis Program	April 2021, 2022

Provided students with feedback on APA formatting

Undergraduate Research Opportunity Program (UROP) Symposium	April 2021

Judge, University of Michigan

Undergraduate Research Symposium	April 2021

Judge, University of Michigan

Graduate Student Panel Member, Teaching Academy	November 2020
Graduate Student Admissions Committee, University of Michigan	2020 – 2022
Graduate Student Recruitment Committee, University of Michigan	2019 – 2020
Brains Rule!, University of Michigan	2019, 2020
Diversity Recruitment Week Volunteer, University of Michigan	March 2019
Cognition and Cognitive Neuroscience Forum Committee, University of Michigan	2018 – 2019
Undergraduate Research Fair, Organizer, Purdue University	April 2018
Community Standards Board Member, Purdue University	2015 – 2018

Workshops

"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

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

Cognitive Science, Developmental Science, Psychological Bulletin, Journal of Experimental Psychology: Applied