

Ying Lin, Ph.D.

Scientist | Human Factors

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Professional Profile

Ying has extensive experience in human behavioral research, including visual perception, decision making, math and spatial cognition, and episodic memory development across the lifespan. She uses a variety of methodological paradigms and tasks to examine perception and cognition. She applies her experience in various cognitive science topics and knowledge of different age groups to investigate and understand human behavior.

Ying has experience in research that involves designing novel tasks, working with age groups across the lifespan, and conducting short- and long-term research studies. She also uses both quantitative and qualitative approaches, including but not limited to psychophysics, reaction time, questionnaires, and cognitive assessments. Prior to joining Exponent, Ying completed her Ph.D. in Brain and Cognitive Sciences at the University of Rochester. Her dissertation research examines visual perceptual decision making using both psychophysical threshold-based paradigms and reaction time coupled with the drift-diffusion model to understand the temporal properties of decision making across visual tasks and age groups. Previously, Ying was a lab manager at Temple University, where she gained research experience in conducting longitudinal studies in children investigating the relationship between math and spatial abilities, as well as episodic memory development from childhood to senescence.

Academic Credentials & Professional Honors

Ph.D., Brain and Cognitive Sciences, University of Rochester, 2023

B.A., Neuroscience, Colgate University, 2015

NIH F31-diversity fellowship, 2023

NIH T32 Center for Visual Science (CVS) traineeship, 2020-2023

Edward Peck Curtis Award for Excellence in Teaching by Graduate Student, University of Rochester, 2022

National Eye Institute Early Career Scientist Travel Grant for Vision Science Society, 2022

Elsevier/Vision Research Travel Award for Vision Science Society, 2020;2021

NSF Research Traineeship Data-Enabled Science and Engineering (NRT-DESE), 2018-2020

Academic Appointments

Instructor, Brain and Cognitive Sciences, University of Rochester, Summer 2022;2023

Co-instructor, Brain and Cognitive Sciences, University of Rochester, 2021-2022

Graduate Teaching Assistant, Brain and Cognitive Sciences, University of Rochester, 2018-2021

Professional Affiliations

Vision Science Society (VSS), member

Publications

Rooks, B., Anthony, M., Chen, Q., Lin, Y., Baran, T., Zhang, Z., Lichtenberg, P., & Lin, F. (2020). A generic brain connectome map linked to different types of everyday decision-making in old age. *Brain Structure and Function*, 1389-1400

Wang, Y., Metoki, A., Smith, D., Medaglia, J., Zang, Y., Benear, S., Lin, Y., & Olson, I.R. (2020). Multimodal Mapping of the Face Connectome. *Nature Human Behaviour*, 1-15

Lin, Y., & Tadin, D. (2019). Motion perception: Slow Development of Center-Surround Suppression. *Current Biology*, 29: R878–R880

Ngo, C.T.*, Lin, Y.*, Newcombe, N.S., & Olson, I.R. (2019). Building up and wearing down episodic memory: Relational memory and pattern separation. *Journal of Experimental Psychology: General* 148(9), 1463-1479

Ren, K.*, Lin, Y.*, Gunderson, E.A. (2019). The role of inhibitory control in strategy change: The case of linear measurement. *Developmental Psychology* 55(7), 1389-1399

Presentations

Lin, Y., Reynoso, J.G., Chen, Z., Haefner, R.M., & Tadin, D. (May, 2023). A new approach for the study of visual orientation perception and decisions. Poster presentation, Vision Science Society (VSS), Tampa, FL

Lin, Y. *, Chen, Z.*, Reynoso, J.G., Haefner, R.M., & Tadin, D. (October, 2022). A unifying framework for perceptual decision-making. Poster presentation, Optica Fall Vision Meeting (FVM), Rochester, NY

Lin, Y.*, Chen, Z.*, Haefner, R.M., & Tadin, D. (May, 2022). Moving toward a unifying framework for perceptual decision making that combines threshold and reaction time approaches. Poster presentation, Vision Science Society (VSS), Tampa, FL

Lin, Y., & Tadin, D. (May, 2021). Estimating decision time in perceptual decision making. Talk presentation, Vision Science Society (VSS)

Lin, Y., & Tadin, D. (May, 2020). Duration threshold: A new approach to estimate decision-making time. Poster presentation, Virtual - Vision Science Society (V-VSS)

Lin, Y., Ngo, C.T., Newcombe, N.S., & Olson, I.R. (July, 2018). Episodic memory across the lifespan. Talk presentation, Temple University Osher Lifelong Learning Center (OLLI) summer cafe series, Philadelphia, PA

Nazareth A., Lin, Y., & Newcombe, N.S. (June, 2018). Spatial navigation in normal aging. Poster presentation, Interdisciplinary Navigation Symposium (iNav), Quebec, Canada.

Lin, Y., Ren, K., & Gunderson, E.A. (October, 2017). Inhibitory control predicts improvement in elementary school students' measurement strategies. Poster presentation, Cognitive Developmental Society (CDS), Portland, OR.

Ren K., Lin, Y., & Gunderson, E.A. (October, 2017). Inhibitory control and the development of fraction concepts: The role of the whole-number bias. Poster presentation, Cognitive Developmental Society (CDS), Portland, OR.

Ngo, C.T., Lin, Y., Olson, R.I., & Newcombe, N.S. (October, 2017). Relational memory and Pattern Separation across the Life Span. Poster presentation, Flux Society, Portland, OR.

Lin, Y., Nazareth, A., Do, A., Haj, R., & Newcombe, N.S. (April, 2017). The developmental origins of cognitive mapping: Age-related changes in spatial navigation studied in a virtual environment. Poster presentation, Society for Research in Child Development (SRCD), Austin, TX.

Lin, Y., Ngo, C.T., Newcombe, N.S., & Olson, I.R. (March, 2017). Tracking the relative development of relational memory and pattern separation. Talk presentation, Eastern Psychological Association (EPA), Boston, MA.

Ngo, C.T., Lin, Y., Newcombe, N.S., & Olson, I.R. (November, 2016). Tracking the relative development of relational memory and pattern separation. Poster presentation, Psychonomics, Boston, MA.

Lin, Y., Brown, R.L., & Gunderson, E.A. (September, 2016). Mental rotation and verbal confounding: Comparing the relations of different mental rotation tasks to early arithmetic calculation. Poster presentation, International Mind, Brain, and Education Society (IMBES), Toronto, Canada.

Gunderson, E.A., Hildebrand, L., Black, C., Lin, Y., & Hamdan, N. (August, 2016). Development of gender differences in number line estimation, but not spatial skills. Poster presentation, Spatial Cognition, Philadelphia, PA.

Lin, Y., Ngo, C.T., Newcombe, N.S., & Olson, I.R. (March, 2016). Remembering things together and apart: The development of memory discrimination and associative memory in young children. Poster presentation, Eastern Psychology Association (EPA), New York, NY