

Bobicheng Zhang

PHD STUDENT · PSYCHOLOGY

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Research

Michigan State University - Dept of Psychology

East Lansing, MI

PHD ADVISOR: DR. JAN BRASCAMP

2020-Present

- Dissertation: “Pupillary responses to perceptual decision making during perceptual bistability”
- Use eyetracker to track eye movements such as optokinetic nystagmus and record pupil size.
- Write an algorithm in Python that allows for inference of perceptual interpretations during bistability without explicit report.
- Use statistical methods such as cluster mass to avoid multiple comparisons during significance testing.

University of Chicago - Institute for Mind and Biology

Chicago, IL

MA ADVISOR: DR. STEVE SHEVELL

2018-2020

- Thesis: “Binocularly driven competing neural responses and the perceptual resolution of color”
- Reviewed literature, conducted experiment and submitted a highly rated MA thesis in less than 7 months.
- Performed statistical analyses such as non-orthogonal contrast to demonstrate that binocular neurons in V1 resolve neural ambiguity during chromatic interocular-switch rivalry.

University of Denver - Dept of Psychology

Denver, CO

SUPERVISOR: DR. TIMOTHY SWEENEY

2016-2018

- Independent Study: “The effect of chromatic adaptation on affective perceptual decision making”
- Reviewed literature in efforts to understand relationships between colors and emotion perception.
- Learned to program psychophysics experiments in Matlab to present morphed emotional faces that were backward-masked.

Publications

PUBLISHED

Zhang, B., & Brascamp, J. W. (2022). Modest effect of knowledge on bistable perception of structure-from-motion. *Vision Research*, 201, 108118.

Zhang, B., Slezak, E., Wang, W., & Shevell, S. K. (2021). Binocularly-driven competing neural responses and the perceptual resolution of color. *Journal of Vision*, 21(10), 15-15.

UNDER REVIEW

Zhang, B., & Brascamp, J. W. The pupil response to perceptual switches: What happens when you ignore them

Smith, O., Jeffery, B., Leuenberger, W., Pizzo, G., **Zhang, B.**, & Davis, C. Journal articles must be made accessible.

IN PREP Weilbach, D. T. & **Zhang, B.** Small Business Resilience Index: Longitudinal evaluation of Colorado Small Business.

Presentations

Zhang, B., Brascamp, J. W., (May 2024). Perceptual switches during structure-from-motion do not elicit pupil dilation. Poster Presentation, Vision Sciences Society, St. Pete's Beach, FL

- Zhang, B.**, Brascamp, J. W., (November 2023). Inferring perceptual switches during structure-from-motion without report. Poster Presentation, The Psychonomic Society Annual Meeting, San Francisco, CA
- Zhang, B.**, Brascamp, J. W., (August 2023). Separating event-related pupillary responses during perceptual bistability. Poster Presentation, Systems Vision Science Symposium, Tübingen, Germany
- Zhang, B.**, Brascamp, J. W., (November 2022). Modest effect of knowledge on bistable perception of structure-from-motion. Poster Presentation, Society for Neuroscience, San Diego, CA
- Zhang, B.**, Brascamp, J. W., (February 2022). Modest effect of knowledge on bistable perception of structure-from-motion. Oral Presentation, Michigan State University Graduate Academic Conference, East Lansing, MI
- Zhang, B.**, Shevell, S. K., (June 2019). Binocularly-driven neural responses to chromatic interocular-switch rivalry. Oral Presentation, University of Chicago Graduate Conference, Chicago, IL

Teaching Experience

- Fall 2024 **Introductory Psychology**, Teaching Assistant
- Spring 2024 **Sensation & Perception | Cognitive Psychology**, Teaching Assistant
- Spring 2023 **Sensation & Perception | Cognitive Psychology**, Teaching Assistant
- Fall 2022 **Introductory Psychology**, Teaching Assistant
- Summer 2022 **Data Analysis in Psychological Research**, Instructor-of-Record
- Spring 2022 **Research Design and Measurements in Psychological Research**, Teaching Assistant
- Fall 2020 **Cognitive Neuroscience**, Teaching Assistant

Professional Experience

- 2021-Present **Research Volunteer**, Energize Colorado
- 2020-Present **Graduate Research Assistant**, Michigan State University
- 2018-2020 **Technical Assistant**, University of Chicago
- 2017-2018 **Intern Behavioral Technician**, Firefly Autism
- 2016-2018 **Undergraduate Research Assistant**, University of Denver
- 2015-2016 **Undergraduate Research Assistant**, Fostering Healthy Futures

Awards & Scholarship

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| 2023 | Conference Award , Michigan State University Council of Graduate Students | \$ 300 |
| | Research Enhancement Award , Michigan State University College of Social Sciences | \$ 660 |
| 2018 | MAPSS Scholarship , University of Chicago Decision of Social Sciences | \$ 24,000 |
| 2018 | Recognition for Academic Achievement and Citizenship , University of Denver Department of Psychology | |

Outreach & Professional Development

SERVICE AND OUTREACH

- 2023-
Present **University Graduate-Professional Judiciary**, Graduate Student Representative
- 2022-
Present **Council of Graduate Students**, Student Representative for Psychology
- 2022-
Present **University Committee on Graduate Studies**, Graduate Student Representative

DEVELOPMENT

Aug 2023 **Systems Vision Science Summer School & Symposium**, Max Planck Institute for Biological Cybernetics *Tübingen, Germany*

Jun 2022 **Certificate for College Teaching Workshop**, Michigan State University *East Lansing, MI*