Bao Hong/洪宝

East China Normal University (ECNU), 3663 Zhongshan Road North, Shanghai, China

Email: bh2378@nyu.edu | Telephone: (+86) 133-8627-7651 | Homepage: Bao-Hong.github.io

Education

09/2020 – 06/2026 Expected: *Ph.D.,* Cognitive Neuroscience, East China Normal University
Affiliated with NYU–ECNU Institute of Brain and Cognitive Science, NYU Shanghai
Advisor: Prof. Li Li (NYU Shanghai)

09/2018 – 06/2019 Minor in Computer Science and Technology, Nanchang University

09/2016 – 06/2020 *B.S.*, Applied Psychology, Nanchang University (Outstanding Graduates)

Research Experience

Ph.D Research: Investigating the Mechanisms of Serial Dependence through Smooth Pursuit Eye Movement

My doctoral research investigates how recent sensory history shapes current perception, combining psychophysics, eye-tracking, EEG, and computational modeling.

10/2024 Neural evidence of serial dependence in ocular tracking

- Used EEG and eye-tracking to investigate how trial-history information is represented in visual cortical activity and modulated by alpha-band oscillations; results will be presented at SfN 2025.

10/2023 Temporal dynamics of serial effects in ocular tracking

- Used eye-tracking and computational modeling to investigate attraction–repulsion dynamics in ocular tracking; results presented at VSS 2024.

09/2021 Serial dependence in smooth pursuit eye movements of preadolescent children and adults

- Used eye-tracking to investigate whether ocular tracking exhibit any serial dependence and the developmental aspects of the serial dependence; findings published in *IOVS* (2024).

Supervised Projects:

06/2024 Center bias in forward and backward heading perception

- Worked with Zhou, Yutong using psychophysics and Bayesian modeling to investigate how locomotion experience shapes asymmetric priors in heading perception; results presented at 2025 China experimental psychology conference.

01/2024 Temporal dynamics of judging heading and scene-relative object motion from optic flow

- Worked with Ji, Yonglun using psychophysics to investigate how the precision of heading and scene-relative object motion judgments changes with optic flow duration; results presented at 2024 China vision science conference.

Collaborative projects:

07/2021 Measuring Visual Discomfort Associated with the Use of Head-Mounted Displays

- This research aims to examine and quantify how the viewing duration through a head mounted display (HMD) leads to visual discomfort. I contributed to programming, data collection and data analysis

09/2020 Brain maturation and the development of ocular tracking ability in children

- This research aims to examine the development of ocular tracking ability and the brain structural changes with age. I contributed to stimulus design and programming, data collection and data analysis.

Publications

Journal papers:

- **Hong, B.**[+], Chen, J.[+], Huang, W., & Li, L.* (2024). Serial Dependence in Smooth Pursuit Eye Movements of Preadolescent Children and Adults. *Investigative Ophthalmology & Visual Science, 65(14),* 37-37. https://doi.org/10.1167/iovs.65.14.37;
  Media coverage: "How Do Our Eyes Help Us Navigate? New Study Looks at Clever Brain 'Shortcut'"
- **Hong, B.**, Zhang, L., & Sun, H.* (2019). Measurement of the Vertical Spatial Metaphor of Power Concepts Using the Implicit Relational Assessment Procedure. *Frontiers in Psychology*, *10*, 1422. https://doi.org/10.3389/fpsyg.2019.01422
- Fan, X. R., Wang, Y. S., ... **Hong, B.**, …& Zuo, X. N.* (2023). A longitudinal resource for population neuroscience of school-age children and adolescents in China. *Scientific data, 10(1),* 545. https://doi.org/10.1038/s41597-023-02377-8.

Manuscripts in Preparation / Under Review:

- **Hong, B.**, Chen J., & Li, L.* (To be submitted). Neural evidence of serial dependence in ocular tracking.
- **Hong, B.**, Chen J., & Li, L.* (To be submitted). Temporal dynamics of serial effects in ocular tracking.
- **Hong, B.**[+], Zhou, Y.T.[+], Ji, Y.L., & Li, L.* (In preparation). A Bayesian account of asymmetric center bias in forward and backward heading perception.
- Ji, Y.L.[+], **Hong, B.**[+], & Li, L.* (In preparation). Temporal dynamics of judging heading and scene-relative object motion from optic flow.
- Huang, W.J.[+], Chen J.[+], **Hong, B.**, Wang, Y., S., Zuo, X., N.*, & Li, L.* (To be submitted). Investigating Brain Structural Correlates of Ocular Tracking in Preadolescent Children and Young Adults.

Selected Conference Presentations

Oral presentation

- **Hong, B**., Zhou, Y.T., Ji, Y.L., & Li, L. (2025, June). Asymmetric center bias in heading judgments for forward and backward self-motion. Talk presented at the 2025 Annual Meeting of the General Psychology and Experimental Psychology of the Chinese Psychological Association, Chengdu, Sichuan, China.
- **Hong, B**., Chen, J., & Li, L. (2024, May). Temporal dynamics of serial dependence in ocular tracking. Talk presented at the 2024 Annual Meeting of the Vision Sciences Society (VSS2024), Florida, USA.
- **Hong, B**., Huang, W.J., Li, E., Chen, J., & Li, L. (2023, August). Ocular tracking abilities in preadolescent children. Talk presented at the 5th China Vision Science Conference (CVSC2023), Wenzhou, Zhejiang, China.

Poster presentation

- **Hong, B**., Chen, J., & Li, L. (2025, November). Neural evidence of serial dependence in ocular tracking. Poster presented at the 2025 Annual Meeting of Society for Neuroscience (Neuroscience 2025), San Diego, USA.
- **Hong, B**., Ji, Y.L., & Li, L. (2024, November). Effect of stimulus range on center bias in heading judgments from optic flow. Poster presented at the 6th China Vision Science Conference (CVSC2024), Guangzhou, Guangdong, China.
- **Hong, B**., Huang, W. J., Li, E., Chen, J., & Li, L. (2023, April). Ocular tracking abilities in preadolescent children. Poster presented the 2023 Annual Meeting of the General Psychology and Experimental Psychology of the Chinese Psychological Association, Jinhua, Zhejiang, China.
- Ji, Y.L., **Hong, B**., & Li, L. (2024, November). Temporal dynamics of judging heading and scene-relative object motion from optic flow. Poster presented at the 6th China Vision Science Conference (CVSC2024), Guangzhou, Guangdong, China.
- Huang, W. J., **Hong, B**., Chen, J., & Li, L. (2024, October). Brain Structural Correlates of Ocular Tracking in Preadolescent Children and Young Adults. Poster presented at the 2024 Annual Meeting of Society for Neuroscience (Neuroscience 2024), Chicago, USA.
- Huang, W. J., **Hong, B**., Wu, J. H., Chen, J., & Li, L. (2023, August). Investigating brain structural correlates of ocular tracking in preadolescent children and young adults. Poster presented at the 5th China Vision Science Conference (CVSC2023), Wenzhou, Zhejiang, China.

Teaching & Service

Teaching Assistant: Perception and the Brain (NYU Shanghai, 2022).

Ad Hoc Reviewer: Psych Journal, Journal of Experimental Psychology: Human Perception and Performance, Neuroscience & Biobehavioral Reviews.

Academic Skills

Psychophysics (MATLAB PsychToolBox), Eye-tracking (Eyelink, VIVE pro eye), EEG (ERP, MVPA, Inverted Encoding Model), MRI, Virtual reality (Vizard, Unity), Data analysis (MATLAB, Python).

Honors and Awards

2025 Travel awards for Neuroscience2025, NYU Shanghai

2024 Outstanding Presentation Awards, ECNU

2024 Travel awards for VSS2024, ECNU

2023 Academic scholarships, ECNU

2022 Excellence in Research Award, NYU Shanghai

2019 Outstanding Graduates, Nanchang University

2018 Excellent Student, Nanchang University