

Tao He (何涛), PhD

School of Psychological and Cognitive Sciences, Peking University

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EDUCATION

Radboud University, Nijmegen, Netherlands 2016 – 2020

Donders Institute for Brain, Cognition and Behaviour

Ph.D. in Neuroscience (supervisor: Floris P. de Lange)

Hangzhou Normal University, Hangzhou, China 2013 – 2016

M.Ed. in Cognitive Neuroscience (supervisor: Zhiguo Wang)

Fujian Medical University, Fuzhou, China 2009 – 2013

B.Sc. in Psychology

RESEARCH AND PROFESSIONAL EXPERIENCES:

Post-doctoral fellow, *School of Psychological and Cognitive Sciences, Peking University*. (Advisor: **Fang Fang**) 2020/10-Present

RESEARCH INTERESTS

Prediction, Perception, Visual Working Memory, Eye Movements.

ACADEMIC SKILLS

Hardware: 3T, 7T MRI scanner, MEG, Eyelink eye-tracker

Software/Languages: Python, Matlab, R, Linux, FSL, Freesurfer, MNE, et al.

PUBLICATIONS

Published – peer reviewed articles

1. He, T., Richter, D., Wang, Z., & de Lange, FP. (2022). Spatial and temporal context jointly modulate the sensory response within ventral visual stream. **Journal of Cognitive Neuroscience**. 34(2), 332-347.
2. Yan, C., He, T., & Wang, Z. (2021). Predictive remapping leaves a behaviorally measurable attentional trace on eye-centered brain maps. **Psychonomic Bulletin & Review**. 1-9.

3. Guo, C.C.G., He, T., Grandjean, J., & Homberg, J. (2021). Knockout serotonin transporter in rats moderates outcome and stimulus generalization. **Translational Psychiatry**. 11, 25.
4. He, T., Fritsche, M., & de Lange, F.P. (2018). Predictive remapping of visual features beyond saccadic targets. **Journal of Vision**, 18(13), 20-20.
5. Ding, Y., Zhao, J., He, T., Tan, Y., Zheng, L., Zhang, X., & Wang, Z. (2016). Selective impairment of covert attention in Chinese dyslexic children. **Dyslexia**, 22(4), 362-378.
6. Yan, C., He, T., Klein, R.M., & Wang, Z. (2016). Predictive remapping gives rise to inhibition of return in environment-centered coordinates. **Psychonomic Bulletin & Review**, 23(6): 1860-1866.
7. Ding, Y., He, T., & Wang, Z. (2016). Inhibitory cueing effects following manual and saccadic responses to arrow cues. **Attention, Perception & Psychophysics**, 78(4): 1020–1029.
8. He, T., Ding, Y., & Wang, Z. (2015). Environment- and eye-centered inhibitory cueing effects are both observed after a methodological confound is eliminated. **Scientific Reports**, 5, 16586.
9. He, T., & Wang, Z. (2015). Spatiotopic, retinotopic, and object-centered reference frames of inhibition of return. **Journal of Psychological Science** (In Chinese), 38 (4): 813 - 821.

Ongoing projects

1. He, T., Ekman, M., Vandenbroucke, A. R., & de Lange, F. P. (2020). Visual working memory representations in visual and parietal cortex do not remap after eye movements. *BioRxiv*, 747329.
2. He, T., Wang, Q., Zhu, X., & Fang, F. Replay of feature information in humans. *In prep.*
3. He, T., Sun, X., & Fang, F. Prediction uncertainty decoded from human occipital cortex predict behavior. *In prep.*

Invited presentations

1. Replay of feature information in humans. **Annual Academic Conference of General and Experimental Psychology Committee of Chinese Psychological Society 2021**. Guiyang, China. October 2021.
2. Spatial properties of expectation suppression throughout the ventral visual stream. **Donders Discussions**. Donders Center for cognitive neuroimaging. Nijmegen, the Netherlands. September 2019.
3. No remapping of working memory across eye movements in early visual cortex. **Donders Discussions**. Donders Center for cognitive neuroimaging. Nijmegen, the Netherlands. October 2018.

4. Removing the scene eliminates the temporal but not the spatial effect of oculomotor inhibition of return. **The 17th Annual Conference of the Chinese Psychological Society**, Beijing, China. October 2014.

Conference

1. He, T., Ekman M., Vandenbroucke A., & de Lange FP. (November 3 – 7, 2018). No Remapping of Working Memory Across Eye Movements in Early Visual Cortex. *Society for Neuroscience (SfN)*. San Diego, US.
2. He, T., Fritsche M., & de Lange FP. (December 14 – 16, 2017). Predictive remapping of visual features beyond saccadic targets. *The Dutch Society for Psychonomy (NVP)*. Egmond aan Zee, the Netherlands.
3. He, T., Fritsche M., & de Lange FP. (August 27 – 31, 2017). Predictive remapping of visual features beyond saccadic targets. *The 40th European Conference on Visual Perception (ECVP)*. Berlin, Germany.
4. He, T., & Wang, Z. (October 16 – 18, 2015). The global effect suggests biases in oculomotor selection. *The 18th Annual Conference of the Chinese Psychological Society*, Tianjin, China.
5. Yan, C., He, T., & Wang, Z. (October 16 – 18, 2015). Visual search eliminates retinotopic inhibition of return (IOR). *The 18th Annual Conference of the Chinese Psychological Society*, Tianjin, China.
6. He, T., & Wang, Z. (July 10-13, 2015). Spatiotopic and retinotopic IORs are both observed when potential methodological confounds are eliminated. *Asia-Pacific Conference on Vision*, Nanyang Technological University, Singapore. **[Student Travel Award]**
7. Ding, Y., He, T., Wang, Z., Tan, Y., Zheng, L., & Zhao, J. (July 10-13, 2015). Inhibition of return in normal developing and dyslexic children. *Asia-Pacific Conference on Vision*, Nanyang Technological University, Singapore.

GRANTS, AWARDS AND HONORS

China Postdoctoral Science Foundation Grant (¥80,000)	2021
International Postdoctoral Exchange Fellowship Program (Talent-Introduction Program, ¥600,000)	2020
Peking University Boya Postdoctoral Fellowship	2020
Radboud University International Travel Grant	2018
China Scholarship Council (€57,600)	2016
Distinguished Graduate of Zhejiang Province, China	2016
Distinguished Graduate Award of Hangzhou Normal University	2016
National Scholarship for Graduate Students	2015

Asia-Pacific conference on vision (APCV) Student Travel Award	2015
Fujian Medical University Outstanding diploma thesis Awards	2013
Fujian Medical University Outstanding Graduate Awards	2013
National College Students' Innovation Project	2011

TEACHING AND SUPERVISION EXPERIENCES

UCL-PKU Summer School in Experimental design in Psychology	2021
Daily supervisor for PhD students, Research Assistants and Undergraduates from Peking university	2020-Present
Daily supervisor for Master students from Donders Cognitive Neuroscience Master Program	2016 - 2020
Multivariate Stats in R	2015
Programming Psychology Experiments in Python	2014