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# Yong Min Choi

최용민 (崔容敏)

Address Room M210, Lazenby Hall, The Ohio State University

1827 Neil Ave, Columbus, Ohio, US, 43210

E-mail choi.1696@osu.edu
Phone +01-614-390-7022

Personal website <a href="https://yongminchoi93.github.io">https://yongminchoi93.github.io</a>

Current Affiliation Vision & Cognitive Neuroscience Lab

The Ohio State University (https://u.osu.edu/golomblab/)

## Research Interests

Visual perception, eye movement, perceptual stability, scene perception, ensemble representation, attention

#### Education



Columbus, Ohio, USA

2020 - 2025 (expected)

Ph.D. candidate in Cognitive Neuroscience, Dept of Psychology

M.S. in Cognitive Neuroscience, Dept of Psychology

Advisor: Julie D. Golomb



Seoul, Republic of Korea (South Korea)

2018 - 2020

M.S. in Cognitive Science,

Advisor: Sang Chul Chong



Seoul, Republic of Korea (South Korea)

2012 - 2018

UNIVERSITY B.A in Psychology (Joint major in Cognitive Science)

# Publications & Preprints \*: (co-)first author; ♥: corresponding author

Narhi-Martinez, W\*., Choi, Y. M., Dube, B., & Golomb, J. D\*. (2025). Allocation of Spatial Attention in Human Visual Cortex as a Function of Endogenous Cue Validity. *Cortex* 

Choi, Y. M\*, Chiu. T. Y., Ferreira. J. & Golomb, J. D<sup>y</sup>. (2025, in press). Maintaining Visual Stability in Naturalistic Scenes: The Roles of Trans-Saccadic Memory and Default Assumptions. Cognition

Choi, Y. M\*y., & Golomb, J. D. (2024). The perceptual and mnemonic effects of ensemble representation on individual size representation. Attention, Perception, & Psychophysics. https://doi.org/10.3758/s13414-024-02963-x

Choi, Y. M\*, Cho, J., & Chong, S. C\*. (2024). Ensemble Memory of a Scene Interacts With Current Perception Regardless of Attentional Requirements. *Journal of Experimental Psychology: Learning, Memory, and Cognition*.

Strzelczyk, D., Clayson, P.E., ..., Lu, Z., Choi, Y. M., Lout, E., Golomb, J.D., ..., Langer, N. (2023 accepted, stage 1 registered replication). Contralateral delay activity as a marker of visual working memory capacity: a multi-site registered replication. *Cortex*. Preprint on PsyArXiv: https://psyarxiv.com/shdea/.

Choi, Y. M\*, & Chong, S. C\*. (2020). Effects of Selective Attention on Mean-Size Computation: Weighted Averaging and Perceptual Enlargement. *Psychological Science*, 0956797620943834.

# Manuscripts under review/in preparation \*: (co-)first author; ♥: corresponding author

Choi, Y. M\*, Chiu. T. Y. & Golomb, J. D\*. (in preparation). Behavioral and Neural Correlates of Impaired Post-Saccadic Scene Perception

Choi, Y. M\* & Golomb, J. D\*. (in preparation). Spatiotemporal Dynamics of Pre-saccadic Remapping in the Human Visual Cortex.

#### Invited talks

Choi, Y. M. (Apr 2025). Through the Eyes of the Brain: Maintaining stable visual perception across saccadic eye movements. Joint Lab Meeting at Dartmouth College (Principle investigators: Dr. Viola Störmer, Dr. Caroline Robertson, and Dr. Brad Duchaine), Hanover, New Hampshire, USA. (Virtual talk)

Choi, Y. M. (Mar 2025). Through the Eyes of the Brain: Receptive Field Remapping in the Human Visual Cortex. 2025 Midwest Regional Conference (MRC), Urbana, Illinois, USA.

Choi, Y. M. (Aug 2024). Visual perception and saccadic eye movements: perceptual impairment and stability mechanisms. Vision and Perception Neuroscience Lab (PI: Dr. Kalanit Grill-Spector), Stanford University, CA, USA. (Virtual talk)

Choi, Y. M. (Jun 2024). Visual perception and saccadic eye movements: perceptual impairment and stability mechanisms. Laboratory of Brain and Cognition (PI: Dr. Chris Baker), National Institute of Mental Health, MD, USA. (Virtual talk)

### Conference talk presentations

- Choi, Y. M. & Golomb, J. D. (May 2025). Voxel-wise predictive encoding models reveal evidence for pre-saccadic remapping in the human visual cortex. the Vision Sciences Society annual conference in Florida, USA.
- Choi, Y. M., Chiu. T. Y., Golomb, J. D. (May 2024). Behavioral and neural correlates of impaired scene perception following saccadic eye movements. the Vision Sciences Society annual conference in Florida, USA.
- Choi, Y. M., Chiu. T. Y., Golomb, J. D. (Nov 2023). Behavioral and neural correlates of impaired scene perception following saccadic eye movements. *Center for Cognitive and Behavioral Brain Imaging research day*, 2023, Columbus, Ohio, USA.
- Choi, Y. M. & Golomb, J.D. (April 2022). Department of psychology Spring Graduate Student Research Forum.
- Choi, Y. M., Cho, J. E., & Chong, S. C. (July 2021). Interaction between current perception and recent multi-feature ensemble representations depending on task-relevance. the Korean Society for Cognitive and Biological Psychology.
- Choi, Y. M., Cho, J. E., & Chong, S. C. (June 2021). Task-irrelevant statistical ensemble memory of a scene affects current perception. the Virtual Working Memory Symposium.
- Choi, Y. M., Park, H. S. (May 2016). The effect of sleep on the type of memory associated with a traumatic event. *The Korean Society for Cognitive Science Annual Spring Conference*.

#### Conference poster presentations

- Choi, Y. M., Golomb, J. D. (Dec 2024). Voxel-Wise Predictive Encoding Models Reveal Evidence for Pre-Saccadic Remapping in the Human Visual Cortex. Center for Cognitive and Behavioral Brain Imaging research day, 2023, Columbus, Ohio, USA.
- Choi, Y.M., Chiu. T. Y., Golomb, J. D.(Jun 2024). Behavioral and neural correlates of impaired scene perception following saccadic eye movements. Organization for Human Brain Mapping, 2024, Seoul, Republic of Korea.
- Ferreira, J., Choi, Y.M., Chiu. T. Y., Golomb, J. D.(May 2024). The Blanking Effect on Detecting Changes in Natural Scenes across Saccades. the Vision Sciences Society annual conference in Florida, USA.

- Okojie, E., Dube, B., Choi, Y.M., Golomb, J. D.(Nov 2023). Assessing Connectivity Between Brain Regions in the Visual Cortex in the Context of Attention and Distraction, the Annual Biomedical Research Conference for Minoritized Scientists, 2023, Phoenix, AZ., USA.
- Choi, Y.M., Chiu. T. Y., Golomb, J. D.(Nov 2023). Behavioral and neural correlates of impaired scene perception following saccadic eye movements. The Society for Neuroscience, 2023, Washington, D.C., USA.
- Choi, Y.M., Chiu. T. Y., Golomb, J. D.(May 2023). Post-saccadic impairment of scene perception. the Vision Sciences Society annual conference in Florida, USA.
- Choi, Y.M., Chiu. T. Y., Golomb, J. D.(Feb 2023). Exploring Scene Perception Following Saccadic Eye Movements. Edward F. Hayes Advanced Research Forum in The Ohio State University, Ohio, USA.
- Choi, Y.M., Golomb, J. D.(Nov 2022). Stimulus regularities help protect visual perception from peri-saccadic impairment. OPAM in Boston, USA.
- Zihan Bai, Choi, Y.M., Golomb, J. D.(May 2022). The influence of background scenes on spatial congruency bias. the Vision Sciences Society annual conference in Florida, USA.
- Choi, Y.M., Golomb, J. D.(May 2022). The effect of stimulus regularity on peri-saccadic perception. the Vision Sciences Society annual conference in Florida, USA.
- Choi, Y.M., Golomb, J. D.(June 2021). Does average size of an ensemble bias individual size representations during perception or working memory retention? the Virtual-Vision Sciences Society annual conference.
- Choi, Y.M., Chong, S. C. (June 2020). The effect of holding multi-feature ensemble in visual working memory on perception. the Virtual-Vision Sciences Society annual conference.
- Choi, Y.M., Chong, S. C. (May 2019). Attending to individual size modulates mean size computation. the Vision Sciences Society annual conference in Florida, USA.
- Choi, Y.M., Chong, S. C. (Feb 2019). Effect of attention on individual size in mean size computation. the Korean Society for Cognitive and Biological Psychology (travel award).

#### Awards & Honors

Best oral presentation at the <u>Center for Cognitive and Behavioral Brain Imaging research day</u> , 2023, Columbus, Ohio, USA	2023	Dec
1 <sup>st</sup> award from poster presentations for a Social and Behavioral Sciences at the <u>Edward F. Hayes</u> <u>Advanced Research Forum.</u>	2023	Feb
Travel Award for a poster presentation at the Korean Society for Cognitive and Biological Psychology annual conference.	2021	Jul
Distinguished Thesis, Yonsei University	2020	Dec
Travel Award for a poster presentation at the Korean Society for Cognitive and Biological Psychology annual conference.	2019	Feb
Excellence Award in Computational Neuroscience Winter School.  Korean Society for Computational Neuroscience	2018	Feb

## Grants / Scholarships / Fellowships

Annual Summer Graduate Research Award - Primary Advisor: Dr. Julie D. Golomb - Visiting Advisor: Dr. Deyue (Dion) Yu	2025	May-Aug
The Center for Cognitive and Brain Sciences, The Ohio State University		
Graduate Student Scholarship (Graduate Student Research Excellence Award)	2023	May-Aug
Department of Psychology, The Ohio State University		

Social and Behavioral Sciences (SBS) Graduate Scholarship	2022 May-Aug
College of Arts and Sciences, The Ohio State University	
University Fellowship	
Graduate School, The Ohio State University	
Scholarship funded by Brain Korea 21+	2019 Mar-Aug
Ministry of Education, South Korea.	
Scholarship funded by Yonsei University for accelerated bachelor / master's scholarship program.	2018 - 2019
Service & Leadership	
Korean American Scientists and Engineers Association (KSEA) – Ohio chapter, Web master	2025 -
Panel for discussing academic research and graduate school at Code for Brain Decoding (CODE) program organized by Center for Cognitive Behavioral and Brain Imaging (CCBBI), OSU	2024 - Jun
Center for Cognitive and Behavioral Brain Imaging (CCBBI) Student Group, Technical Director.	2022 - 2023
Founding member and Vice-President of CogSci:IN Student Society of Cognitive Science at Yonsei University	2017 - 2018
Military service obligation at the police agency Seobu Police Station, Daejeon, Republic of Korea	2013 - 2015
Extra-curricular Activities	
Kavli Summer Institute in Cognitive Neuroscience (Santa Barbara, CA)	2022 Jun
R workshop for psychological science (lecturer. Do-Joon Yi, Psychology department, Yonsei University)	2019 Feb
Computer Neuroscience Winter School Korean Society for Computational Neuroscience	2018 Feb
Volunteer staff in KSCS (The Korean Society for Cognitive Science) annual spring conference at Sogang University.	2013 May
Mentoring	
Ehigialoya Okojie – Currently a PhD student in Neuroscience at UNC Chapel Hill (Advised by Dr. Charlotte Boettiger)	2023 - 2024
Mentoring Ehi throughout post-baccalaureate Research Education Program (PREP), investigating functional connectivity between brain regions under category-selective attention and distraction condition.	
Jake Ferreira – Currently an Analytics Services Associate at Veeva Systems	2023 - 2024
Mentoring Jake with undergraduate thesis project (The Ohio State University), investigating how human visual system maintain phenomenological stability across eye movement, using a blanking paradigm.	

Zihan Bai – Currently a research assistant / lab manager in Dr. Elizabeth Goldfarb's lab

2019 - 2022

Mentoring undergraduate thesis project (The Ohio State University), investigating the role of background scene context on object-location binding. Together, we conducted three behavioral experiments and presented the results as a poster at 2022 VSS.