YAELAN JUNG

Postdoctoral Fellow
Department of Psychology, Emory University,
Atlanta, GA 30322
Email: yaelan.jung@emory.edu

ACADEMIC POSITIONS

Postdoctoral Fellow, Emory University 2021–present
Department of Psychology
Advisor: Daniel D. Dilks

Postdoctoral Fellow, Princeton University 2020–2021
Department of Psychology
Advisor: Lauren Emberson

EDUCATION

Ph.D. in Psychology, University of Toronto 2014–2019
Advisors: Dirk Bernhardt-Walther, Amy S. Finn

M.S. in Cognitive Science, Yonsei University 2011–2013
Advisor: Sang Chul Chong

B.A. in Psychology, Yonsei University 2007–2011

AWARDS AND SCHOLARSHIPS

The Friends of Patrick Brain Research Award	2019
Doctoral Completion Award, University of Toronto	2018–2019
Student Travel Award, Computational Cognitive Neuroscience (CCN)	2018
Conference Grant, University of Toronto	2017
Student Travel Award, Vision Sciences Society	2016
Conference Grant, University of Toronto	2016
Ontario Trillium Scholarship	2014–2018
BK21 Scholarship, Ministry of Education, Science, and Technology, Korea	2011–2013

PUBLICATIONS

1. **Jung, Y.**, Yoon, H. K., Rennert, R. J., & Dilks, D. D. (*in press*). Probabilistic parcels for the scene-selective regions. *Imaging Neuroscience*.
2. **Jung, Y.**, & Dilks, D. D. (*in press*). A fine-grained cortical blueprint for three scene systems in newborns. *Nature Communications*.
3. Yoon, H. K., **Jung, Y.**, & Dilks, D. D. (2026). Scene-selective region in the superior parietal lobule selectively supports visually-guided navigation, not general egocentric motion. *Cerebral Cortex*. https://doi.org/10.1093/cercor/bhag050
4. Dilks, D. D., Rennert, R. J., & **Jung, Y.** (2026). What do we know about navigation development from the perspective of cognitive neuroscience in humans? In N. S. Newcombe & K. Cheng (Eds.), Challenges in Navigation Research: Mapping New Directions. Cham: Springer Cham. https://doi.org/10.1007/978-3-032-20563-6_7

5. **Jung, Y.**, & Dilks, D. D. (2025). Early development of navigationally relevant location information in retrosplenial complex. *Proceedings of the National Academy of Sciences*, *122*, e2503569122. https://doi.org/10.1073/pnas.2503569122
6. Yoon, H. K., **Jung, Y.**, Persichetti, A. S., & Dilks, D. D. (2025). A scene-selective region in the superior parietal lobule for visually guided navigation. Cerebral Cortex, 35(4), bhaf082. https://doi.org/10.1093/cercor/bhaf082
7. **Jung, Y.,** Hsu, D., & Dilks, D. D. (2024). "Walking selectivity" in the occipital place area in 8-year-olds, not 5-year-olds. *Cerebral Cortex, 34(3)*, bhae101. https://doi.org/10.1093/cercor/bhae101
8. Dilks, D. D., **Jung, Y.**, & Kamps, F. (2023). The development of human cortical scene processing. *Current Directions in Psychological Science*, 32(6), 479–486. https://doi.org/10.1177/09637214231191772
9. **Jung, Y.,** Forest, T. A., Walther, D. B., & Finn, A. S. (2023). Neither enhanced nor lost: The unique role of attention in children's neural representations. *Journal of Neuroscience*, *43*(21), 3849-3859. https://doi.org/10.1523/JNEUROSCI.0159-23.2023
10. **Jung, Y**., Walther, D. B., & Finn, A. S. (2021). Children automatically abstract categorical regularities during statistical learning. *Developmental Science*, e13072. https://doi.org/10.1111/desc.13072
11. **Jung, Y**., & Walther, D. B. (2021). Neural representations in the prefrontal cortex are task dependent for scene attributes but not for scene categories. *Journal of Neuroscience*, *41(34),* 7234–7245. https://doi.org/10.1523/jneurosci.2816-20.2021
12. **Jung, Y.**, Larsen, B., & Walther, D. B. (2018). Modality-independent coding of scene categories in prefrontal cortex. *Journal of Neuroscience, 38(26)*, 5969–5981. https://doi.org/10.1523/jneurosci.0272-18.2018
13. **Jung, Y.**, Larsen, B., & Walther, D. B. (2018). Using decoding error patterns to trace the neural signature of auditory scene perception. Proceedings of the 8th International Workshop on Pattern Recognition in Neuroimaging, Singapore. https://doi.org/10.1109/prni.2018.8423950
14. **Jung, Y.**, Kang, M.S., & Chong, S.C. (2016). The effect of attention on initial dominance in binocular rivalry. *Perception, 45(5),* 492–504.
15. **Jung, Y.**, & Chong, S.C. (2014). The effect of attention on visible and invisible adapters. *Perception, 43*(6), 549–568. https://doi.org/10.1068/p7660
16. **Jung, Y**., & Chong, S. C. (2014). The effect of verbalization on repetition priming for faces. *Journal of Cognitive Psychology, 26(*4), 413–422. https://doi.org/10.1080/20445911.2014.895370
17. Kim, K.-J., Eo, K.-Y., **Jung, Y**., Kim, S.-O., & Cho, S.-B. (2013). Evolutionary conditions for the emergence of robotic theory of mind with multiple goals, *IEEE Workshop on Robotic Intelligence in Informationally Structured Space (RiiSS)*, pp. 48-54. https://doi.org/10.1109/riiss.2013.6607928

MANUSCRIPTS UNDER REVIEW OR IN REVISION

1. **Jung, Y.**, Yoon, H. K., Rennert, R. J., & Dilks, D. D. (*under review*). Connectivity shapes cortical function and drives its development: evidence from the visually guided navigation system. *Journal of Neuroscience*.
2. **Jung, Y.**, He, O., Gakio, S., & Dilks, D. D. (*under review*). Dissociating configural and featural processing for faces and houses: Developmental and neuropsychological evidence. *Developmental Science*.
3. Rennert, R. J., Persichetti, A., **Jung, Y.,** ..., & Dilks, D. D. (*in revision*). Peripheral vision is necessary for navigating through places, while central vision is key to recognizing them. *Scientific Reports*

MANUSCRIPTS IN PREPARATION

1. **Jung, Y.,** Kang, J., & Dilks, D. D. (*in preparation*). The parahippocampal place area represents places at the basic categorical level.
2. **Jung, Y.,** & Dilks, D. D. (*in preparation*). Domain-specific organization of configural processing in the dorsal visual stream revealed by 7T fMRI.
3. **Jung, Y.,** & Dilks, D. D. (*in preparation*). Dorsal visual contributions to ensemble perception revealed by Williams syndrome.
4. **Jung, Y.,** & Dilks, D. D. (*in preparation*). Neural circuit for heading direction in the human brain is present near birth.

CONFERENCE TALKS

Yoon, H. K., **Jung, Y.**, & Dilks, D. D. Dissociable systems for visually guided navigation and reaching in human parietal cortex. *Vision Sciences Society* (2026).

Jung, Y., & Dilks, D. D. Early development of navigationally relevant location information in retrosplenial complex. *Vision Sciences Society* (2025).

Yoon, H. K., **Jung, Y.**, & Dilks, D. D. A new scene-selective region in the superior parietal lobule and its potential involvement in visually-guided navigation. *Vision Sciences Society* (2024).

Jung, Y., & Dilks, D. D. The occipital place area (OPA) supports walking in 8-year-olds, not 5-year-olds. *Vision Sciences Society* (2023).

Jung, Y., Forest, T. A., Walther, D. B., & Finn, A. S. Top-down modulation of visual cortex in adults and children. *Society for Research in Child Development* (2021).

Jung, Y., Forest, T. A., Walther, D. B., & Finn, A. S. Top-down modulation of visual cortex in adults and children. *Vision Sciences Society* (2020).

Jung, Y., Walther, D. B., & Finn, A. S. Automatic categorical abstraction during statistical learning in adults and children. Toronto Area Memory Group (TAMeG) (2019).

Jung, Y., Larsen, B., & Walther, D. B. Using decoding error patterns to trace the neural signature of auditory scene perception. *Pattern Recognition in Neuroimaging* (2018)**.**

Jung, Y., Larsen, B., & Walther, D. B. Conceptual representations of scene categories in prefrontal cortex transcend sensory modalities. *Vision Sciences Society* (2016).

Jung, Y., Larsen, B., & Walther, D. B. Conceptual representations of scene categories in prefrontal cortex transcend sensory modalities. *Society for Neuroscience* (2015).

CONFERENCE POSTERS

Jung, Y., & Dilks, D. D. A fine-grained cortical blueprint for scene processing at the start of human life. FLUX (2026).

Jung, Y., & Dilks, D. D. Connectivity shapes cortical function and drives its development: evidence from the visually-guided navigation system. Vision Sciences Society (2026).

Yoon, H. K., **Jung, Y.**, Persichetti, A. S., & Dilks, D. D. The superior parietal lobule scene region is involved in visually-guided navigation. *Vision Sciences Society* (2025).

Jung, Y., Persichetti, A. S., & Dilks, D. D. Recognizing places versus navigating through them are differently sensitive to increasingly peripheral visual information. Vision Sciences Society (2024).

Jung, Y., & Dilks, D. D. The occipital place area (OPA) supports walking in 8-year-olds, not 5-year-olds. *Cognitive Development Society* (2024).

Jung, Y., Forest, T. A., Walther, D. B., & Finn, A. S. Top-down modulation of sensory cortex in adults and children. *FLUX* (2019).

Jung, Y., & Walther, D. B. Neural coding of non-visual percepts inferred from images of natural scenes. *Vision*

Sciences Society (2019).

Jung, Y., & Walther, D. B. Decoding thermal sensations from human brain activity. *Society for Neuroscience* (2018).

Jung, Y., Walther, D. B., & Finn, A. S. Automatic categorical abstraction during visual statistical learning in children and adults. *Vision Sciences Society* (2018).

Jung, Y., Walther, D. B., & Finn, A. S. Statistical learning of categorical regularities in adults and children. *Cognitive Neuroscience Society* (2018).

Jung, Y., Larsen, B., & Walther, D. B. Modality-independent coding of scene categories in prefrontal cortex. *Lake Ontario Visionary Establishment* (2018).

Jung, Y., Larsen, B., & Walther, D. B. Modality-independent coding of concepts in prefrontal cortex. *Computational Cognitive Neuroscience* (2017).

Jung, Y., Larsen, B., & Walther, D. B. Modality-independent coding of concepts in prefrontal cortex. *Pattern Recognition in Neuroimaging* (2017).

Jung, Y., Larsen, B., & Walther, D. B. Discriminating multimodal from amodal representations of scene categories using fMRI decoding. *Vision Sciences Society* (2017).

Jung, Y., Larsen, B., & Walther, D. B. Decoding the neural representations of real-world soundscapes. In International Conference on Perceptual Organization hosted by the Center for Vision Research at York University. (2015).

Jung, Y., Kang, M.S., & Chong, S.C. Effect of attention on the initiation of binocular rivalry. *Vision Sciences Society* (2014).

Eo, K.Y., Cha, O., **Jung, Y.**, & Chong, S.C. The relationship between vividness of visual imagery and indirect size measurements of the visual cortex. *Vision Sciences Society* (2014).

Jung, Y., & Chong, S.C. The effect of spatial attention on adaptation induced by visible and invisible stimuli. *Vision Sciences Society* (2013).

Jung, Y., & Chong, S. C. Visibility modulates the effect of spatial attention. *Asia-Pacific Conference on Vision* (2012).

Jung, Y., & Chong, S. C. The effect of verbalisation on repetition priming for faces. *Vision Sciences Society* (2012).

INVITED TALKS

Emory University, Department of Psychology, Research Seminar	2026
Emory University, Department of Psychology, Research Seminar	2025
Emory University, Department of Psychology, Research Seminar	2024
Yonsei University, Department of Psychology, Graduate Seminar	2023
Emory University, Emory Eye Center, Vision Research Seminar	2023
Emory University, Department of Psychology, Research Seminar	2022
Emory University, Department of Psychology, Research Festival	2022
University of California, San Diego, Sensation & Perception Brown Bag	2022
Epstein lab, University of Pennsylvania	2019
Baby lab, Princeton University	2019
Nancy Kanwisher's lab, MIT	2018
University of Toronto, Development Interest Group (DIG)	2018
University of Toronto, Ebbinghaus Empire Meeting	2016
University of Toronto, Graduate-Led Academic Seminar Series (GLASS)	2015
University of Toronto, Ebbinghaus Empire Meeting	2015

TEACHING AND MENTORING

Teaching

Emory University, Biology of Eye, Guest Lecturer	2023–2026
University of Toronto, Statistics II, Teaching Assistant	2018–2019
University of Toronto, Intro to Developmental Psychology, Teaching Assistant	2017
University of Toronto, Learning and Plasticity, Guest Lecturer	2015
University of Toronto, Statistics I, Teaching Assistant	2014–2018
University of Toronto, Sensation and Perception, Teaching Assistant	2014–2017

Mentoring

- Emory University
  - Clara Hilsman 2026–present
  - Talia Hansen-Mann 2024–2025
  - Stuart Gakio, Caroline Martin 2023–2024
  - Marina Hashim, Joseph Ann 2022–2023
  - Ryan Ruhde, Debbie Hsu, Olivia He 2021–2023
- Princeton University
  - Matthew Weatherhead 2020–2021
- University of Toronto
  - Aria Wills, Maria Mazaharally 2018–2019
  - Hailey den Elzen 2018 Summer
  - Lora Stepanian 2017–2018
  - Ming Ma 2016–2017

SELECTED MEDIA ATTENTION

“Le développement du sens de l’orientation chez les enfants” *Radio Canada*	May 2025
“Children as young as five can navigate a ‘tiny town’” *Emory News Center*	May 2025

PROFESSIONAL MEMBERSHIPS

Cognitive Development Society, Cognitive Neuroscience Society, FLUX, Society for Neuroscience, Society for Research in Child Development, Vision Sciences Society

SERVICE AND OTHER ACTIVITIES

Ad hoc Reviewer

Nature Neuroscience, Nature Communications, Journal of Neuroscience, Cognition, Journal of Experimental Psychology: Human Perception and Performance, Journal of Cognitive Neuroscience, NeuroImage, Scientific Reports

Volunteering/Outreach

Science Night at the Child Study Center, Emory University	2025
Fernbank Museum, Science Outreach, Atlanta, GA	2024–2025
Atlanta Science Festival, Atlanta, GA	2022
New York City Science and Engineering Fair	2020
Science Rendezvous, University of Toronto	2017–2019