

# Woon Ju Park

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## Education

2015 – 2017	University of Rochester	Ph.D. Brain and Cognitive Sciences
2012 – 2015	University of Rochester	M.A. Brain and Cognitive Sciences
2010 – 2012	Yonsei University	M.S. Cognitive Science
2005 – 2010	Yonsei University	B.A. Psychology

## Employment

2024 – present	Assistant Professor	School of Psychology, Georgia Institute of Technology
2022 – 2024	Research Scientist II	Department of Psychology, University of Washington
2018 – 2022	Postdoctoral Scholar	Department of Psychology, University of Washington
2017 – 2018	Postdoctoral Associate	Center for Visual Science, University of Rochester

## Funding

2023 – 2027	NIH NEI K99/R00 Pathway to Independence Award (PI, K99: \$252,784 / R00: \$737,029) “Anatomical, Functional, and Computational Constraints of Sensory Cross-modal Plasticity Following Early Blindness”
2021 – 2023	Weill Neurohub Postdoctoral Fellowship (PI, \$150,000) “Neural and Functional Auditory Plasticity in the Brain Following Early Blindness”
2016 – 2017	Autism Science Foundation, Pre-doctoral Training Fellowship (PI, \$25,000) “Characterizing Visual Processing Differences in Individuals with ASD”

## Honors and Awards

2025	Student Recognition of Excellence in Teaching: Annual CIOS Award, Georgia Tech <i>* Recognizes top 40 instructors with exceptional response rates and scores on student evaluations</i>
2025 – present	Academic Partner, Project Aria, Meta
2025	Arts at Tech Catalyst Award, Georgia Institute of Technology (\$6,200)
2024	Smithgall-Watts Early Career Award, Georgia Institute of Technology (\$15,000)
2020	Finalist, Life Sciences Research Foundation Postdoctoral Fellowship
2016	Cold Spring Harbor Laboratory Summer Program – Computational Neuroscience: Vision
2016	Student Travel Award, International Meeting for Autism Research
2012	Best Student Talk, Korean Society for Cognitive Science Annual Spring Conference
2010 – 2012	BK21 Participation Scholarship, Ministry of Education, Science, and Technology, Korea
2009	Highest Honors, Yonsei University
2007, 2008	Dean’s list, University of Washington

## Publications – *In preparation & submitted*

(\*\* Equally contributing first authors / ## Senior author)

1. **Park, W. J.**, & Fine, I. (in prep) Enhanced pitch processing in early blind individuals is due to enhanced cortical gain.
2. **Park, W. J.**, Ichinose, M., Woodman, G., Tadin, D., & Park, S. (in prep) The precision of visual working memory is limited by neural noise during perceptual processing.

3. Poole, A., Chang, K., Wang, F. Fine, I., & **Park<sup>##</sup>, W. J.** (in prep) The effects of blindness on the structure of Heschl's gyrus.
4. Chen, S., Croom, S., Yates, J., Schauder, K. B., Tadin, D., & **Park<sup>##</sup>, W. J.** (in prep) Social effects of crowd gaze on visual search.
5. Alleluia Shenge, V., Chen, S., **Park, W. J.**, & Tadin, D. (submitted) Viewpoint-dependent face recognition during a naturalistic visual search. *Vision Research*.

### Publications – Preprints

1. Melnick, M. D., **Park, W. J.**, Croom, S., Chen, S., Battelli, L., Busza, A. Huxlin, K. R., & Tadin, D. Online transcranial random noise stimulation improves perception at high levels of visual white noise. *bioRxiv*. <https://doi.org/10.1101/2020.06.22.165969>

### Publications – Journal Articles

(\*\* Equally contributing first authors)

1. **Park, W. J.**, & Fine, I. (2024) A unified model for cross-modal plasticity and skill acquisition. *Frontiers in Neuroscience*. 18. 1-6.
2. **Park, W. J.**, & Fine, I. (2023) The perception of auditory motion in sighted and early blind individuals. *PNAS*. 120(49), 1-9.
3. Fine, I. & **Park, W. J.** (2023) Do you hear what I see? Perception of object motion in early blind individuals. *Philosophical Transactions of the Royal Society B*, 378(1869), 1-11.
4. Isenstein, E. L., **Park, W. J.**, & Tadin, D. (2021) Atypical and inflexible visual encoding in autism spectrum disorder. *PLOS Biology*. [invited preview]
5. **Park<sup>\*\*</sup>, W. J.**, Schauder<sup>\*\*</sup>, K. B., Kwon, O. S., Bennetto, L. & Tadin, D. (2021) Atypical visual motion prediction in autism spectrum disorder. *Clinical Psychological Science*. 1-17.
6. Barbot, A., **Park, W. J.**, Ng, C. J., Zhang, R., Huxlin, K., Tadin, D., & Yoon, G. (2021) Functional reallocation of sensory processing resources caused by long-term neural adaptation to altered optics. *eLife*. 1-27.
7. **Park, W. J.**, & Fine, I. (2020). New insights into cortical development and plasticity: from molecules to behavior. *Current Opinion in Physiology*, 16, 50–60.
8. Schauder, K. B., **Park, W. J.**, Eckstein, M. P., Tsank, Y., Tadin, D., Bennetto, L. (2019) Initial eye gaze to faces and its functional consequences on face identification abilities in autism spectrum disorder. *Journal of Neurodevelopmental Disorders*. 11, 1-20.
9. Tadin, D., **Park, W. J.**, Dieter, K. C., Melnick, M. D., Lappin, J., & Blake, R. (2019) Spatial suppression promotes rapid figure-ground segmentation of moving objects. *Nature Communications*. 10:2732, 1-12.
10. **Park, W. J.**, Schauder, K. B., & Tadin, D. (2018) Pupillometry: Consciousness reflected in the eyes. *eLife*. 7:e35374, 1-3. [invited preview]
11. **Park<sup>\*\*</sup>, W. J.**, Schauder<sup>\*\*</sup>, K. B., Zhang, R., Bennetto, L. & Tadin, D. (2017) High internal noise and poor external noise filtering characterize perception in autism spectrum disorder. *Scientific Reports*. 7, 1-12.
12. Schauder<sup>\*\*</sup>, K. B., **Park<sup>\*\*</sup>, W. J.**, Bennetto, L. & Tadin, D. (2017) Larger receptive field size as a mechanism underlying atypical motion perception in autism spectrum disorder. *Clinical Psychological Science*. 5, 827-842.
13. Im, H. Y., **Park, W. J.**, & Chong, S. C. (2015). Ensemble statistics as units of selection, *Journal of Cognitive Psychology*, 27(1), 114-127.
14. **Park, W. J.**, & Chong, S. C. (2012). The influence of painting composition on human perception. *Seeing and Perceiving*, 25(6), 521-543.

15. **Park, W. J.**, Jung, I., Park, J., Bae, S., & Chong, S. C. (2011). The effect of spatial dimension shifts in rotated target position search. *Korean Journal of Cognitive Science*, 22(2), 103-121.

## Publications – Book Chapters

1. Fine, I., Savage, T., Lewis, L. B., & **Park, W. J.** (2024) The effects of visual deprivation after infancy. *Levin: Adler's Physiology of the Eye*.
2. **Park, W. J.** & Tadin, D. (2018) Motion perception. In J Serences (Ed), *The Stevens' Handbook of Experimental Psychology and Cognitive Neuroscience, Sensation, Perception & Attention*, 4<sup>th</sup> Edition, Wiley, 415-488.

## Conference Presentations

(Talks are marked with \*\*)

1. Poole, A., Chang, K., Wang, F., Fine, I., & **Park, W. J.** (submitted) The effects of early and late onset blindness on the structure of Heschl's gyrus. *Vision Sciences Society*.
2. **Park, W. J.**, Chang, K., Pyles, J., & Fine, I. (2024, June) Anatomical definition of hMT+ using quantitative R1 mapping. Organization for Human Brain Mapping.
3. **\*\*Park, W. J.**, Chang, K., Fine, I. (2024, May). Constraints of cross-modal plasticity within hMT+ following early blindness. *Vision Sciences Society. Part of a symposium titled "The multifaceted effects of blindness and how sight might be restored"*
4. **Park, W. J.**, Chang, K., Poole, A., Garrison, T., & Fine, I. (2023, July) Auditory motion selectivity in human planum temporale. *Organization for Human Brain Mapping*.
5. **Park, W. J.**, & Fine, I. (2022, July) Enhanced pitch perception in early blind individuals is explained by reduced internal noise. *Gordon Research Conference: Auditory System*.
6. **\*\*Park, W. J.**, & Fine, I. (2022, May) How do early blind individuals experience auditory motion? *Vision Sciences Society*.
7. **\*\*Park, W. J.**, & Fine, I. (2021, October) The mechanisms underlying enhanced auditory motion perception in early blind individuals. *Optica Fall Vision Meeting*.
8. Awad, J. F., **Park, W. J.**, Fine, I. (2019, May) Auditory segregation of noise bands in early blind individuals. *Vision Sciences Society*.
9. **\*\*Park, W. J.**, Schauder, K. B., Kwon, O-S, Bennetto, L. & Tadin, D. (2018, May) Atypical visual motion prediction in autism spectrum disorder. *Vision Sciences Society*.
10. **\*\*Park, W. J.**, Ichinose, M., Park, S., & Tadin, D. (2017, May) Perceptual inefficiencies predict individual differences in working memory both in typical adults and in schizophrenia. *Vision Sciences Society*.
11. **\*\*Ichinose, M.**, **Park, W. J.**, Tadin, D. & Park, S. (2017, March) Visual working memory deficits in schizophrenia: A case of noisy perceptual processing? *International Congress on Schizophrenia Research*.
12. Schauder, K. B., **Park, W. J.**, Tadin, D., & Bennetto, L. (2016, November) Increased internal noise in autism spectrum disorder and associations with response variability and overall symptom severity. *Society for Neuroscience*.
13. **\*\*Park, W. J.**, Schauder, K. B., Bennetto, L., & Tadin, D. (2016, May) Evidence for elevated internal noise in autism spectrum disorder. *Vision Sciences Society*.
14. **Park, W. J.**, Schauder, K. B., Bennetto, L., & Tadin, D. (2016, May) Atypical motion sensitivity characterized by larger receptive fields in autism spectrum disorder. *International Meeting for Autism Research*.
15. Schauder, K. B., **Park, W. J.**, Kwon, O., Tadin, D., & Bennetto, L. (2016, May) Motion prediction abilities in autism spectrum disorder. *International Meeting for Autism Research*.
16. Adkinson, B. D., Foss-Feig, J. H., **Park, W. J.**, Levy, E., Santamauro N., Schleifer, C., Schauder, K. B.,

- Deckert, K., Srihari, V., Krystal, J. Tadin, D., McPartland, J. C., & Anticevic, A. (2016, May) Psychophysical correlates of excitatory/inhibitory imbalance during visual motion perception in adults with ASD and schizophrenia. *International Meeting for Autism Research*.
17. Foss-Feig, J. H., Adkinson, B. D., **Park, W. J.**, Levy, E., Santamauro, N. Schleifer, C., Deckert, K., Srihari, V., Krystal, J., Tadin, D., McPartland, J. C., & Anticevic, A. (2016, May) Dissociating visual correlates of context modulation in ASD and schizophrenia. *International Meeting for Autism Research*.
  18. **Park, W. J.**, & Tadin, D. (2015, May) Background subtraction as a mechanism for efficient motion segregation. *Vision Sciences Society*.
  19. **Park, W. J.**, & Tadin, D. (2014, May) Mechanisms of motion-based object segregation. *Vision Sciences Society*.
  20. Yoo, S. –A., **Park, W. J.**, & Chong, S. C. (2012, July) Filling-in the blind spot with the average direction. *Asia-Pacific Conference on Vision*.
  21. **\*\*Park, W. J.**, Im, H. Y., & Chong, S. C. (2012, June). Bottom-up and top-down interactions between ensemble statistics and selective attention. *Korean Society for Cognitive Science Annual Spring Conference*.
  22. **Park, W. J.**, Im, H. Y., & Chong, S. C. (2012, May). Ensemble statistics and attentional selection. *Vision Sciences Society*.
  23. **\*\*Park, W. J.**, & Chong, S. C. (2011, June). Processing of compositions influences perceptual similarity in paintings. *Korean Society for Cognitive Science Annual Spring Conference*.
  24. **Park, W. J.**, & Chong, S. C. (2011, May). Mental representation of compositions in paintings is based on their perceptual similarities. *Vision Sciences Society*.

## Invited Talks

2024	Computational Cognition Conference, Georgia Institute of Technology
2024	Cognitive Science Colloquium, Yonsei University, Seoul, Korea
2024	Research Excellence Cluster in Vision, University of British Columbia, Canada
2023	Auditory Neuroscience Training Grant Journal Club, University of Washington
2022	Global Psychology Webinar Series, Department of Psychology, Yonsei University, Seoul, Korea
2022	CogPer Seminar, Department of Psychology, University of Washington
2018	Memorial Art Gallery, Rochester, NY
2017	Interdisciplinary Center for Language Science Talk Series, University of Rochester
2017	Department of Psychology, University of Washington
2017	Department of Psychology, Vanderbilt University
2015	Child Study Center, Yale University School of Medicine
2015	Brain and Cognitive Sciences Lunch Talk, University of Rochester
2015	Brain and Cognitive Sciences Lunch Talk, University of Rochester
2012	Yonsei Cognitive Science Seminar, Yonsei University, Seoul, Korea

## Teaching Experience

### Instructor, Georgia Institute of Technology

2025 Spring	PSYC 4803E/8890E Special Topics – Neuroplasticity in Atypical Development
2024 Fall	PSYC 4803A/8890A Special Topics – Neuroplasticity in Atypical Development

### Instructor

2015 Fall	BCS 151 Perception and Action, University of Rochester
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### Guest Lecturer

2014 Spring	BCS 153 Cognition (Topic: Understanding appreciation of art), University of Rochester
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### Teaching Assistant

2014 Fall      BCS 110 Neural Foundations of Behavior, University of Rochester  
2014 Spring    BCS 153 Cognition, University of Rochester  
2010 Spring    COG 3101 Introduction to Cognitive Science, Yonsei University

### Mentoring Experience

#### Postdoctoral Researchers (Georgia Institute of Technology)

2024 – present    Loic Daumail  
2024 – present    Yi Gao

#### Graduate Students (Georgia Institute of Technology)

2024 – present    Yang Yang

#### Undergraduate Research Assistants (Georgia Institute of Technology)

2024 – present    Chakri Srikara Karthikeya Attili, Margaret Wei  
2025 – present    Quinlan Tran, Joshua Jackson

#### Graduate Students (University of Washington)

2022              Kelly Chang  
2018 – 2019      Jasmine Awad

#### Center for Visual Science Summer Undergraduate Internship (University of Rochester)

2017              Sholei Croom  
2016              Laura Bedalov

#### Undergraduate Research Assistants (University of Washington & University of Rochester)

2022 – 2023      Taylor Garrison, Amy Poole  
2020 – 2021      Priyanka Kotipalli, Ruichen Tang, Feiyi Wang (Honors student)  
2019              Miaoran Li, Wesley Ganz, Jackson Watson  
2017 – 2019      Shuyi Penny Chen  
2016 – 2017      Alice Ban, Kabir Al-tariq  
2015 – 2017      Zachary Arnold  
2015 – 2016      Jared Band

### Mentee Awards and Honors

#### Undergraduate Students

2021              Feiyi Wang: Mary Gates Research Scholarship, University of Washington  
2019              Shuyi Penny Chen: Catherine Block Memorial Fund Prize, University of Rochester  
2018              Shuyi Penny Chen: Walt and Bobbi Makous Prize, University of Rochester

### Journal Reviewing

Current Biology, Autism, Scientific Reports, Journal of Neuroscience, eNeuro, Brain Research, PLOS One, NeuroImage, Brain and Behavior, iScience, Research in Developmental Disabilities, Cognition

### Professional Membership and Service

#### Memberships (Past and present)

Vision Sciences Society  
Organization for Human Brain Mapping  
Society for Neuroscience

International Society for Autism Research  
Korean Society for Cognitive Science

Professional Service

- 2024 – present Member, School of Psychology Award Committee, Georgia Institute of Technology
- 2024 Panelist, Career Transitions Workshop, Vision Sciences Society
- 2017 Co-organizer of undergraduate research development workshop
  - Center for Visual Science, University of Rochester
- 2016 Student co-organizer of CVS symposium “Future of Attention” student journal club
  - Center for Visual Science, University of Rochester
- 2015 – 2016 Student co-chair of graduate student recruitment
  - Brain and Cognitive Sciences, University of Rochester
- 2010 – 2012 Administrative assistant
  - Graduate Program in Cognitive Science, Yonsei University, Seoul, Korea

Community Service

- 2024 A short conversation with BBC Audio (Unexpected Elements) on blindness
- 2018 Curatorial Consultant, Memorial Art Gallery, Rochester, NY
  - Advisory role for an exhibition on Monet and human perception
- 2013 – 2015 Rochester Museum & Science Center, Sciences Saturdays, Rochester, NY
  - Help with the explanations of visual illusions (Presenter: Duje Tadin)
- 2013 Teen Leaders Program, City of Rochester, Rochester, NY
  - Presentation: “Stories of my life and the brain”

Other

- 2012 Book editor, “HYO: life and work of Seung Hyo Park”
- 2009 – 2012 Translator and exhibition assistant (August – December 2009)
  - Gallery Brain Factory, Seoul, Korea