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

Academic Positions

Primary Appointments

2024 – present	Assistant Professor	School of Psychology, Georgia Tech
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

Secondary Appointments (Affiliated/Program/Participating Faculty)

2024 – present Neuro Next Initiative, Neuroscience & Neurotechnology PhD Program,
Center for Excellence in Computational Cognition, VRlandia,
Center for Research and Education in Navigation, Georgia Tech

Grants, Awards, & Honors

Major 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"

Competitively Allocated Resources

2025 – present Academic Partner, Project Aria, Meta (support value: $50,000)

2025 Arts at Tech Catalyst Award, Georgia Tech ($6,200)

Honors and Awards

2025 Student Recognition of Excellence in Teaching: Annual CIOS Award, Georgia Tech
** Recognizes top 40 instructors with exceptional response rates and scores on student evaluations*

2025 Thank-A-Teacher Certificate, Georgia Tech

2024 Smithgall-Watts Early Career Award, Georgia Tech ($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 Scholarship, Ministry of Education, Science, and Technology, Korea

Publications – *In Preparation & Submitted*

([##] Senior author)

1. **Park, W. J.**, Ichinose, M., Woodman, G., Tadin, D., & Park, S. (submitted) The precision of visual working memory is determined by sensory neural noise. *Nature Neuroscience.*
2. **Park, W. J.**, & Fine, I. (in prep) Enhanced pitch processing in early blind individuals is due to enhanced cortical gain.
3. Poole, A., Chang, K., Wang, F. Fine, I., & **Park[##], 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[##], W. J.** (in prep) Social effects of crowd gaze on visual search.
5. Alleluia Shenge, V., Chen, S., **Park, W. J.**, & Tadin, D. (in prep) Viewpoint-dependent face recognition during a naturalistic visual search.

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**, **, W. J**., Schauder**, 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**, W. J**., Schauder**, 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**, K. B., **Park**, 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,* 4th Edition, Wiley, 415-488.

Conference Presentations

(Talks are marked with **, ## Senior author)

1. Poole, A., Chang, K., Wang, F., Fine, I., & **Park##, W. J.** (2025, May) 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

Guest Lecturer

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

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 Tech)

2024 – present	Loic Daumail
2024 – present	Yi Gao

Graduate Students (Georgia Tech)

2024 – present	Yang Yang

Undergraduate/Master's Research Assistants (Georgia Tech)

2024 – present	Chakri Srikara Karthikeya Attili, Margaret Wei
2025 – present	Quinlan Tran, Joshua Jackson, Jordan Kopcha, Yaojie Huang

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

2025	Joshua Jackson: President's Undergraduate Research Award, Georgia Tech
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

2025 – present	Member, Center for Excellence in Computational Cognition Steering Committee, Georgia Tech
2024 – present	Member, School of Psychology Award Committee, Georgia Tech
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, CVS symposium "Future of Attention" student journal club ・ Center for Visual Science, University of Rochester
2015 – 2016	Student co-chair, graduate student recruitment committee ・ Brain and Cognitive Sciences, University of Rochester
2010 – 2012	Administrative assistant ・ Graduate Program in Cognitive Science, Yonsei University, Seoul, Korea

Master's Committee

2025	Vicky Yu

Preliminary Examination Committee

2025	Chih-Chia Jess Hsing
2025	Yinqi Huang

Community Service

2025	Participation in the TechArts Festival (Joshua Jackson)
2025	Participation in the Atlanta Science Festival (Loic Daumail, Chakri Attili, Yang Yang)
2024	A short conversation with BBC Audio (Unexpected Elements) on blindness
2018	Curational Consultant, Memorial Art Gallery, Rochester, NY ・ Advisory role for an exhibition on Monet and human visual 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