Jongmin Moon

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RESEARCH KEYWORDS

Computational Neuroscience · Systems Neuroscience · Vision · Decision-making · Probabilistic Models

APPOINTMENTS

2024 – present	**Postdoctoral Fellow** Center for Perceptual Systems The University of Texas at Austin, Austin, TX, United States • Advisor: Robbe L. T. Goris

EDUCATION

2018 – 2024	**Ph.D.**, Biomedical Engineering Ulsan National Institute of Science and Technology, Ulsan, South Korea • Advisor: Oh-Sang Kwon • Thesis title: *Common computational principles underlying biases in visual perception, memory and confidence*
2022	Computational Neuroscience: Vision Cold Spring Harbor Laboratory, Lloyd Harbor, NY, United States
2012 – 2018	**B.S.**, Human Factors Engineering; System Design and Control Engineering Ulsan National Institute of Science and Technology, Ulsan, South Korea • Compulsory military service (2013 – 2015)

PUBLICATIONS

Peer-Reviewed Journal Articles

1. **Moon**, **J**., Tadin, D.*, & Kwon, O.-S.* (2023). A key role of orientation in the coding of visual motion direction. *Psychonomic Bulletin & Review*, *30*(2), 564–574. https://doi.org/10.3758/s13423-022-02181-2
2. **Moon**, **J**., & Kwon, O.-S. (2022). Attractive and repulsive effects of sensory history concurrently shape visual perception. *BMC Biology*, *20*, 247. https://doi.org/10.1186/s12915-022-01444-7
3. **Moon**, **J**.[#], Choe, S.[#], Lee, S., & Kwon, O.-S. (2019). Temporal dynamics of visual attention allocation. *Scientific Reports*, *9*, 3664. https://doi.org/10.1038/s41598-019-40281-7

Under Review

4. Saftari, L. N.[#], **Moon**, **J**.[#], & Kwon, O.-S. (under review). Environmental motion presented ahead of self-motion modulates heading direction estimation.

In Preparation

5. **Moon**, **J**., Chung, D., Kim, H. J., Sul, S., & Kwon, O.-S. (in preparation). Optimal confidence judgments in perceptual estimations.
6. **Moon**, **J**., Yoon, H., & Kwon, O.-S. (in preparation). A behavioral signature of efficient coding in working memory representations.

PRESENTATIONS

Conference and Workshop

7. Yoon, H., **Moon, J.**, & Kwon, O.-S. (2025, May 16–20). *Attractive serial dependence occurs after motion repulsion*. [Poster presentation]. Vision Sciences Society Annual Meeting, St. Pete Beach, FL, United States.

8. **Moon, J.**, Raj G. P., A., & Goris, R. L. T. (2025, April 25–27). *Bayesian confidence paradox*. [Poster presentation]. Workshop on Natural Environments, Tasks, and Intelligence, Austin, TX, United States.

9. **Moon, J.**, Yoon, H., & Kwon, O.-S. (2024, May 17–22). *Probing bidirectional serial dependence in an N-back orientation estimation task*. [Oral presentation]. Vision Sciences Society Annual Meeting, St. Pete Beach, FL, United States.

10. **Moon, J.**, Saftari, L. N., & Kwon, O.-S. (2023, August 24–27). *Environmental motion presented ahead of self-motion modulates the heading direction estimation*. [Poster presentation]. Conference on Cognitive Computational Neuroscience, Oxford, United Kingdom.

11. Saftari, L. N., **Moon, J.**, & Kwon, O.-S. (2023, May 19–24). *Synchronicity of visual and vestibular signals modulates the causal inference in heading direction estimation*. [Poster presentation]. Vision Sciences Society Annual Meeting, St. Pete Beach, FL, United States.

12. **Moon, J.**, & Kwon, O.-S. (2022, May 13–18). *Confidence in perceptual estimation reflects behavioral variability, but not biases*. [Poster presentation]. Vision Sciences Society Annual Meeting, St. Pete Beach, FL, United States.

13. **Moon, J.**, & Kwon, O.-S. (2020, June 19–24). *Motion perception is biased toward the orientation, not the direction, of the preceding motion*. [Poster presentation]. Vision Sciences Society Annual Meeting, virtual.

14. **Moon, J.**, & Kwon, O.-S. (2019, May 17–22). *Additivity of attractive and repulsive sequential effects in motion direction estimation*. [Oral presentation]. Vision Sciences Society Annual Meeting, St. Pete Beach, FL, United States.

15. Choe, S., **Moon, J.**, & Kwon, O.-S. (2018, May 18–23). *Temporal dynamics of visual attention allocation*. [Poster presentation]. Vision Sciences Society Annual Meeting, St. Pete Beach, FL, United States.

Domestic Conference

16. Yoon, H., **Moon, J.**, & Kwon, O.-S. (2025, February 12–14). *Attractive serial dependence occurs after motion repulsion*. [Poster presentation]. 62nd Annual Meeting of the Korean Society of Cognitive and Biological Psychology, Gwangju, South Korea.

17. **Moon, J.**, Yoon, H., & Kwon, O.-S. (2024, February 1–3). *Probing bidirectional serial dependence in an N-back orientation estimation task*. [Oral presentation]. 61st Annual Meeting of the Korean Society of Cognitive and Biological Psychology, Seoul, South Korea.

18. **Moon, J.**, Saftari, L. N., & Kwon, O.-S. (2023, February 16–17). *An environmental motion presented ahead of body motion modulates the causal inference in heading direction estimation*. [Oral presentation]. 60th Annual Meeting of the Korean Society of Cognitive and Biological Psychology, Seoul, South Korea.

19. **Moon, J.**, & Kwon, O.-S. (2021, July 15–16). *The effects of behavioral variability and biases on confidence in perceptual estimation*. [Oral presentation]. 58th Annual Meeting of the Korean Society of Cognitive and Biological Psychology, virtual.

20. **Moon, J.**, & Kwon, O.-S. (2020, August 27–28). *A key role of non-directional orientation in the coding of visual motion direction*. [Oral presentation]. 57th Annual Meeting of the Korean Society of Cognitive and Biological Psychology, virtual.

21. **Moon, J.**, & Kwon, O.-S. (2019, February 14–15). *Sequential effects in motion direction estimation*. [Oral presentation]. 56th Annual Meeting of the Korean Society of Cognitive and Biological Psychology, Pyeongchang, South Korea.

22. Choe, S., **Moon, J.**, & Kwon, O.-S. (2018, January 25–26). *Temporal dynamics of visual attention*. [Poster presentation]. 55th Annual Meeting of the Korean Society of Cognitive and Biological Psychology, Suwon, South Korea.

HONORS AND AWARDS

2024	Best Presentation Award	Korean Society of Cognitive and Biological Psychology
2024	2nd Place in Data Challenge	Korean Society of Cognitive and Biological Psychology
2023	Best Presentation Award	Korean Society of Cognitive and Biological Psychology
2022	CSHL Course Award	Howard Hughes Medical Institute
2021	Best Presentation Award	Korean Society of Cognitive and Biological Psychology
2018 – 2024	UNIST Graduate Scholarship	Ulsan National Institute of Science and Technology
2018	Best Poster Award	Korean Society of Cognitive and Biological Psychology
2016	Samsung Dream Class Scholarship	Samsung Welfare Foundation
2012	UNIST Dream Scholarship	Ulsan National Institute of Science and Technology
2012 – 2018	UNIST Undergraduate Scholarship	Ulsan National Institute of Science and Technology

TEACHING

Guest Lectures

2025	INP Bootcamp	Interdisciplinary Neuroscience Program, UT Austin

Teaching Assistant

2019 – 2023	Experimental Design	Department of Biomedical Engineering, UNIST
2019 – 2022	Sensation and Perception	Department of Biomedical Engineering, UNIST
2017 – 2018	Science of Human Behavior	School of Liberal Arts, UNIST

Others

2016	Instructor	World Friends ICT Volunteer Program in Ghana
2016	Mentor	Samsung Dream Class, Samsung Welfare Foundation
2014	Mentor	Educational Outreach Program, ROKAF
2013 – 2015	Assistant Drill Instructor	Republic of Korea Air Force

SERVICE

Departmental service

2024 – 2025	CPS Colloquium Coordinator	Center for Perceptual Systems, UT Austin

Ad Hoc Reviewer – Journal

Nature Communications (co-review)
Psychological Research

Ad Hoc Reviewer – Conference

Conference on Cognitive Computational Neuroscience

REFERENCES

Robbe L. T. Goris, Ph.D.
Associate Professor
Center for Perceptual Systems
The University of Texas at Austin
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Oh-Sang Kwon, Ph.D.
Associate Professor
Department of Biomedical Engineering
Ulsan National Institute of Science and Technology
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