Curriculum Vitae
Anqi Zhang

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Center for Perceptual Systems
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Education

2024 (expected)	PhD in Physics, The University of Texas at Austin Dissertation: Human Visual Detection and Search in Natural Backgrounds Supervisors: Wilson S. Geisler, Ernst-Ludwig Florin
2023	MS in Statistics, The University of Texas at Austin
2018	BS in Physics, The University of Science and Technology of China

Research Experience

Appointments

2021 - Present	Graduate Researcher at the Center for Theoretical and Computational Neuroscience, The University of Texas at Austin
2019 - Present	Graduate Researcher at the Center for Perceptual Systems, The University of Texas at Austin
2017 Summer	Research Intern at the Institute of Quantum Science and Engineering, Texas A&M University
2016 - 2018	Undergraduate Researcher at Hefei National Laboratory for Physical Sciences at the Microscale, The University of Science and Technology of China

Journal Articles

[A5] **Zhang, A.**, Seemiller, E. S., & Geisler, W. S. (2023). Phase-dependent asymmetry of pattern masking in natural images explained by intrinsic position uncertainty. Journal of Vision, 23(10), 16-16.

[A4] **Zhang, A.**, & Geisler, W. S. (2022). Detection of targets in filtered noise: whitening in space and spatial frequency. JOSA A, 39(4), 690-701.

[A3] **Zhang, A.**, Liao, Z., Chen, R., & Wang, D. W. (2018). Suppression of quantum noises in coherent atom lithography through squeezing. JOSA B, 35(4), 752-758.

[A2] Fang, Z. X., Chen, Y., Ren, Y. X., Gong, L., Lu, R. D., **Zhang, A.**, Zhao H., & Wang, P. (2018). Interplay between topological phase and self-acceleration in a vortex symmetric Airy beam. Optics express, 26(6), 7324-7335.

[A1] He, R., Hua, J., **Zhang, A.**, Wang, C., Peng, J., Chen, W., & Zeng, J. (2017). Molybdenum disulfide–black phosphorus hybrid nanosheets as a superior catalyst for electrochemical hydrogen evolution. Nano letters, 17(7), 4311-4316.

Under Review

1. **Zhang, A.**, & Geisler, W. S. (2024). Optimal Visual Search with Highly Heuristic Decision Rules. arXiv preprint arXiv:2409.12124. (submitted to Journal of Vision)

Seminar Talks

[T8] **Zhang, A.** (2024) Human Visual Detection and Search in Natural Backgrounds. Center for Perceptual Systems (CPS) Trainee Talk.

[T7] **Zhang, A.** (2024) Understanding Covert Search in Noise Backgrounds Using Heuristic Decision Analysis. Vision Science Society (VSS) Conference.

[T6] **Zhang, A.** (2023) Phase-Dependent Asymmetry of Pattern Masking in Natural Images. Center for Nonlinear Dynamics (CNLD) Seminar.

[T5] **Zhang, A.** (2023) Phase-Dependent Asymmetry of Pattern Masking in Natural Images. Center for Perceptual Systems (CPS) Trainee Talk.

[T4] **Zhang, A.** (2022) Detection of Targets in Filtered Noise: Whitening in Space and Spatial Frequency. Center for Nonlinear Dynamics (CNLD) Seminar.

[T3] **Zhang, A.** (2021) The Human Visual System Whitens in Space But Not in Spatial Frequency. Center for Perceptual Systems (CPS) Trainee Talk.

[T2] **Zhang, A.** (2020) The Human Visual System Whitens in Space But Not in Spatial Frequency. Candidacy Talk, Department of Physics, The University of Texas at Austin.

[T1] **Zhang, A.**, Da-Wei Wang (2017) Suppression of quantum noises in coherent atom lithography through squeezing. TAMU-Princeton-Baylor Summer Symposium on Quantum Science and Engineering.

Poster Presentations

[P5] Geisler, W. S. & **Zhang, A.** (2024) Bayesian Heuristic Decision Analysis of Visual Search. Vision Science Society (VSS) Conference.

[P4] **Zhang, A.**, & Geisler, W. S. (2023) Phase-Dependent Asymmetry of Pattern Masking in Natural Images Explained by Intrinsic Position Uncertainty. Natural Environment, Tasks, and Intelligence (NETI) Workshop and Vision Science Society (VSS) Conference.

[P3] **Zhang, A.**, & Geisler, W. S. (2022) Detection of Targets in Complex Backgrounds: Partial Whitening, Reliability Weighting, and Intrinsic Position Uncertainty. Vision Science Society (VSS) Conference.

[P2] **Zhang, A.**, & Geisler, W. S. (2020) The Human Visual System Whitens in Space But Not in Spatial Frequency. Vision Science Society (VSS) Conference.

[P1] **Zhang, A.**, Da-Wei Wang (2017) Suppression of quantum noises in coherent atom lithography through squeezing. TAMU-Princeton-Baylor Summer Symposium on Quantum Science and Engineering.

Peer Review Services

2024	Optics Continuum, ISSN: 2770-0208
2023	Biomedical engineering online, ISSN: 1475-925X; Applied Optics, ISSN: 1559-128X

Professional Affiliations

Since 2019	Vision Science Society

Teaching Experience

2022 Fall - 2023 Spring	Assistant Instructor (as the instructor of record) for Introductory Physical Science: Mechanics and Heat (PS 303), The University of Texas at Austin
2022	Advanced Certificate of Teaching, Teaching Preparation Series at the Center for Teaching and Learning, The University of Texas at Austin
2019 Spring - 2020 Spring	Teaching Assistant for Laboratory for Electricity and Magnetism, Light, Atomic and Nuclear Physics (PHY 117N), The University of Texas at Austin
2018 Fall	Teaching Assistant for Experiments in Mechanics (PHY 101L), The University of Texas at Austin
2017	Teaching Assistant for Introduction to Programming in C (lecture-lab course), The University of Science and Technology of China

Mentoring Experience

2022 Spring	Research Mentor for the Directed Reading Program in Physics, The University of Texas at Austin

Professional Experience

Internships

2020 Summer — Developer, Clairvoyant Networks, Inc.
Developed with C# a kiosk application to survey hospital visitors about COVID-19 symptoms.

2019 Summer — Data Analyst, Clairvoyant Networks, Inc.
Classified sleep stages using machine learning models and time series measurements from the Theora Rest Sleep Monitor.