SUNGJOON PARK 박성준

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EDUCATION

Texas A&M University, College Station, TX 2020 – 2022
Master of Science in Psychological Sciences
Thesis: *Relationship between Perspective Taking with Space and People*
Supervisor: Dr. Heather Burte

University of Waterloo, Ontario, Canada 2013 – 2020
Bachelor of Arts in Psychology, with Thesis, Minor in Philosophy & Cognitive Science
Thesis: *Mental Model Updating and Pupil Response*
Thesis Advisor: Dr. Britt Anderson

EMPLOYMENT

Research Assistant 2023 – Present
Psychology Department
Carnegie Mellon University, Pittsburgh, PA
Supervisors: Dr. Laurie Heller & Dr. Michael Tarr

RESEARCH INTEREST

Neural mechanism of spatial cognition and its relationship with non-spatial cognitive functions; Memory; Vision; Neuroimaging; Computational techniques

RESEARCH EXPERIENCE

tarrlab, Carnegie Mellon University 2023 - Present
PI: Dr. Michael Tarr
Roles: Research Assistant

- fMRI study participant recruitment, data collection & processing
- BrainDiVE: Using data driven method to generate images designed to activate specific regions of interest. Allowing for targeted exploration of neural selectivity in human visual cortex (Supervised by Dr. Andrew Luo & Dr. Margaret Henderson)
- featsynth: Investigating neural selectivity of coarse and fine category visual features (Supervised by Dr. Margaret Henderson)
- Setup of computing solutions; Assembling computer, and setting up software

Auditory Lab, Carnegie Mellon University 2023 - Present
PI: Dr. Laurie Heller
Roles: Research Assistant

- Data collection, organization, visualization, statistical analysis, and feedback/editing manuscripts for three Misophonia projects.
- Naturalistic Multimodal Interaction: Research of sound locallization and the effect of visual and auditory cross-modal interaction in naturalistic setting (Collaboration with the CMU School of Design; Dr. Daniel Rosenberg Muñoz)
- Morphing Everyday Sounds: Development of sound morphing tool that produce psychoacustically informed morphs using machine learning methods (Collaboration with the CMU Computer Science department; Dr. Chris Donahue)
- Misophonia: Investigating pupil response to disgusting everyday sounds and videos for misophonic and non-misophonic people.

Spatial Thinking & STEM Learning Lab, Texas A&M University 2020 - 2022
PI: Dr. Heather Burte
Roles: Graduate Assistant & Researcher

- *Master's Thesis*: Relationship between Perspective Taking with Space and People.
  - Investigating the potential shared representation and mechanism involved in spatial and social (e.g., theory of mind) cognitive processes.
  - R Scripts, figures, and manuscript available on GitHub.
- Assisted in formulation of discussion topics and experiments for a Human Cognitive Processes course as part of a Presidential Transformational Teaching Grant project.
- Involved in recruitment, management, training and evaluations of research assistants.

Human Brain Processes During Complex Locomotor Navigation, Texas A&M University 2021 - 2022
PI: Dr. Andrew Nordin & Dr. Heather Burte
Roles: Graduate Researcher

- The project focused on developing a synchronized mobile EEG and eye tracking system to research brain processes during complex locomotor navigation.
- Learned to operate gait (human motion) research hardware & software (Motek) and analysis pipeline.
- Directed and trained 3 undergraduate research assistants to develop experiments using the Python programming language and the Psychopy package.
- Involved in the recruitment process of research assistants.

Britt Lab, University of Waterloo 2018 - 2020
PI: Dr. Britt Anderson
Roles: Research Assistant, Undergraduate Researcher

- *Undergraduate Thesis*: Mental Model Updating and Pupil Response.
  - Designed and conducted research on pupillary response to belief updating.
  - Programmed computerized eye tracking task using Python and the psychopy library.
  - Self-driven to learn how to program (R & Python) and use the Linux computing environment.
  - Took initiative to self-learn and use niche eye-tracking and monitor hardware.
  - R & Python codes, and manuscript available on GitHub.
- Assisted in two projects that contributed to Master's theses.

PUBLICATION

Park. S., Ferguson. A. J., Rosenberg. D. M., Heller. L., (*In-preparation*). Lateral position discrimination using wavefield synthesis in an open environment to test the effect of observer-controlled motion on the ventriloquist effect. *Auditory Perception & Cognition.*

Qiu. Y., **Park. S.**, Oszczapinska. U., Heller. L., (*In-review*). Visual Disgust Constricts Pupils in Response to Misophonic Movies. *Frontiers in Psychology.*

Oszczapinska. U., **Park. S.**, Qiu. Y., Nance. B., Julien. M., Heller. L., (2025). The impact of disgusting sounds on pupil diameter of misophonic and non-misophonic listeners. *Psychophysiology.*

Park. S., Watanabe. B., Burte. H., (2022). Perspective taking and reference frames for spatial and social cognition. *Paper submitted to the CogSci 2022 Annual Conference.*

PRESENTATION

Ferguson. A. J., **Park. S.**, Rosenberg. D. M., Heller. L., (2025, Accepted). Lateral position discrimination using wavefield synthesis in an open environment to test the effect of observer-controlled motion on the ventriloquist effect. *Poster presented at the joint 188th Meeting of the Acoustical Society of America and 25th International Congress on Acoustics in New Orleans, Louisiana.*

Henderson M. H., Luo. A. F., **Park. S.**, Tarr. M. J., Wehbe. L. (2025). Generative modeling tools for characterizing human higher visual cortex *Poster presented at the Cognitive Neuroscience Society 2025 Annual Meeting.*

Heller. L., Ferguson. A. J., **Park. S.**, Rosenberg. D. (2024). Naturalistic multimodal spatial interactions. *Talk presented at the 23rd Annual Auditory Perception, Cognition, & Action Meeting.*

Park. S., Watanabe. B., Burte. H., (2022). Is Mentalizing Related to Spatial Perspective-Taking? *Poster presented at the Psychonomic Society 2022 Annual Meeting.*

Park. S., Watanabe. B., Burte. H., (2022). Perspective taking and reference frames for spatial and social cognition. *Poster presented to the CogSci 2022 Annual Conference.*

Nutalapati. N., Raina. Y., Watanabe. B., **Park. S.**, & Burte. H., (2022). How well do you know your campus? A pilot study examining the relationship between anxiety and spatial ability. *Poster presented at the Texas A&M University Student Research Week 2022.*

Park. S., Watanabe. B., Burte. H., (2021). Individual Differences in Perspective Taking for Spatial And Social Cognition. *Poster presented at the Psychonomic Society 2021 Annual Meeting.*

Park. S., Watanabe. B., Burte. H., (2021). Reference Frames for Spatial and Social Thinking: Individual Differences in Strategy Use. *Poster presented at the SPATIAL COGNITION 2020/1 Conference.*

Park. S., Watanabe. B., Burte. H., (2021). Being good at taking people's spatial perspective might not necessarily mean you are good at "taking their perspective". *Poster presented at the Texas A&M University Psychological and Brain Sciences: 2nd Year (Ph. D) Poster Session 2021.*

Deshpande. T., **Park. S.**, Burte. H., (2021). Pointing North Online: Using photographs of known environments to evaluate north pointing accuracy. *Poster presented at the CogSci 2021 Annual Conference.*

Park. S., Anderson. B., (2020). Mental Model Updating and Pupil Response. *Poster presented at the Virtual Psychonomics 2020 Annual Meeting.*

LEARNING EXPERIENCE

Summer 2021	Computational Neuroscience, Neuromatch Academy
Fall 2021	Basic Training Course on Gait Analysis and Research with the M-Gait, Motek

TEACHING EXPERIENCE

Texas A&M University 2021 - 2022

Graduate Teaching Assistant, 4 Semesters

- Assisted and instructed labs for undergraduate psychology statistics, research methods, and scientific writing courses.

Lab Trainer, 3 Semesters

- Trained, up to 9, undergraduate research assistants per semester in a research lab on how to use R and RStudio.
- Students learned to produce descriptive statistics, visualizations, and conduct correlation, t-tests, and ANOVA tests.

SKILLS

Programming:	R, Python, C++
Software & Tools:	Linux, CLI, git, Remote tools (i.e., ssh, rsync, etc...), SPSS, Microsoft Office, Qualtrics, LaTeX
fMRI:	FSL, fmriprep, pycortex, freesurfer
Statistics:	Regression (linear, generalized, multiple, hierarchical), Mixed Effects Model, Correlation, t-test, ANOVA, Descriptive Statistics, contrast analysis
Hardware:	**Eye Tracking:** SR Research EyeLink 1000 Plus, CRS ltd. LiveTrack, SmartEye Aurora **Gait Tracking:** Motek M-Gait
Languages:	English, Korean