

# SUNGJOON PARK 박성준

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## EDUCATION

**Texas A&M University**, College Station, TX 2020 – 2022  
Master of Science in Psychological Sciences, with Thesis  
Supervisor: Dr. Heather Burte

**University of Waterloo**, Ontario, Canada 2013 – 2020  
Bachelor of Arts in Psychology, with Thesis, Minor in Philosophy & Cognitive Science  
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 for Dr. Andrew Luo & Dr. Maggie 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 Miso-phonía projects.
- Naturalistic Multimodal Interaction; Research of sound localization and the effect of visual and auditory cross-modal interaction (Collaboration with the CMU School of Design; Dr. Daniel Rosenberg Muñoz)
- Morphing Everyday Sounds; Development of sound morphing tool that produce psychoacoustically informed morphs using machine learning methods (Collaboration with the CMU Computer Science department; Dr. Chris Donahue)

**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.
  - Used Unity to create virtual environment for study stimuli.
  - 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

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Oszczapinska. U., **Park. S.**, Qiu. Y., Nance. B., Julien. M., Heller. L., (*Submitted*). 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

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Henderson M. H., Luo. A. F., **Park. S.**, Tarr. M. J., Wehbe. L. (In-preparation). 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

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Summer 2021      Computational Neuroscience, Neuromatch Academy

Fall 2021          Basic Training Course on Gait Analysis and Research with the M-Gait, Motek

## TEACHING EXPERIENCE

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### 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

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**Programming:** R, Python, C++

**Software & Tools:** Linux, CLI, git, Remote tools (i.e., ssh, rsync, etc...), SPSS, Microsoft Office, Qualtrics,  $\text{\LaTeX}$

**fMRI:** FSL, fmripreg, 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