Jaeseon Song

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EMPLOYMENT

Postdoctoral Researcher, Psychological & Brain Sciences, University of Delaware **August 2024 - Present**

EDUCATION

Ph.D. in Psychology, University of Georgia **2024**
M.A. in Psychology, Chungbuk National University (South Korea) **2015**
B.A. in Psychology, Chungbuk National University (South Korea) **2013**

PEER-REVIEWED PUBLICATIONS

Song J. & Brown, J. M. (2024). The influence of 'advancing' and 'receding' colors on figure-ground perception under monocular and binocular viewing. *Attention, Perception, & Psychophysics.* https://doi.org/10.3758/s13414-024-02956-w.

Song J., Breitmeyer, B. G., & Brown, J. M. (2024). Further examination of the pulsed- and steady-pedestal paradigms under hypothetical parvocellular- and magnocellular-biased conditions. *Vision.; 8*(2):28, 1-14. https://doi.org/10.3390/vision8020028

Song, J., Breitmeyer, B. G., & Brown, J. M. (2024) Examining increment thresholds for Gabor patches under hypothetical parvo- and magnocellular-biased conditions. *Attention, Perception, & Psychophysics*, *86*, 213-220. https://doi.org/10.3758/s13414-023-02819-w.

Song, J., Jung, W. H., Choo, J. H., Chung, K. M., & Jung, W. S. (2014). Important Perceptual and Cognitive Factors to Include in Apology E-mails to Dissatisfied customers. *Korean Society for Cognitive and Biological Psychology, 26*(2), 95-135.

Cha, H. N., **Song, J.**, & Jung, W. H. (2013). The effects of color, spatial frequency and shape on chromatic induction. *Korean Society for Cognitive and Biological Psychology, 25*(4), 383-401.

CONFERENCE PUBLICATIONS

Song, J., Breitmeyer, B. G., & Brown, J. M. (2024). The effect of fast flicker adaptation on contrast discrimination. *Journal of Vision, 24(10)*, 611. https://doi.org/10.1167/jov.24.10.611

Song, J., Breitmeyer, B. G., & Brown, J. M. (2023). Further examination of the pulsed- and steady-pedestal paradigms under hypothetical parvocellular- and magnocellular-biased conditions. *Journal of Vision, 23*(9), 4837. https://doi.org/10.1167/jov.23.9.4837

Song, J., Breitmeyer, B. G., Nightingale, J., & Brown, J. M. (2022). Examining increment thresholds as a function of pedestal contrast under hypothetical parvocellular- and magnocellular-biased conditions. *Journal of Vision, 22*(14), 3225. https://doi.org/10.1167/jov.22.14.3225

Song, J., & Brown, J. M. (2019). Further exploration of antagonistic interactions in figure-ground perception. *Journal of Vision, 19*(10), 35c. https://doi.org/10.1167/19.10.35c

Plummer, R. W., Brown, J. M., & **Song, J.** (2018). Using artificial scotoma fading to explore antagonistic interactions in figure-ground perception. *Journal of Vision, 18*(10), 805. https://doi.org/10.1167/18.10.805

OTHER CONFERENCE PRESENTATIONS (ORAL & POSTER)

Song, J., Breitmeyer, B. G., & Brown, J. M. (2024). *The effect of fast flicker adaptation on contrast discrimination.* Poster presented at the Vision Sciences Society 2024.

Song, J., & Brown, J. M. (2021). *Figure-ground perception with color in monocular and binocular vision.* Poster presented at the 62nd Annual Psychonomic Society Meeting, Virtual.

Song, J., & Jung, W. H. (2015). *The variation in angle perception due to angle size, angle orientation and ratio of line length.* Talk presented at the International Conference on Education & Social Sciences, Istanbul, Turkey.

Song, J., & Jung, W. H. (2015). *The effect of the thickness of the outlines of the empty squares on the Hermann grid illusion.* Poster presented at the Annual Conference of the Korean Society for Cognitive and Biological Psychology, Jeju, Korea.

Song, J., & Jung, W. H. (2014). *The effects of straight road scene and added salient lines on angle illusion.* Poster presented at the Annual Conference of Human Computer Interaction Korea, Seoul, Korea.

Song, J., & Jung, W. H. (2014). *The effect of the Zöllner illusion on angle perception.* Poster presented at the European Conference on Visual Perception, Belgrade, Serbia.

Song, J., & Jung, W. H. (2014). *The effects of added lines and orientations of the image on angle illusion in road scenes.* Talk presented and attended the panel discussion at the Sixth International Conferences on Advances in Multimedia, Nice, France.

Song, J., & Jung, W. H. (2014). *Effects of line length, color contrast, and interval of segments in angle perception.* Talk presented at the Annual Conference of the Korean Society for Cognitive and Biological Psychology, Buyeo, Korea.

Song, J., & Jung, W. H. (2013). *The effects of angle size and length ratio in angle perception.* Poster presented at the European Conference on Visual Perception, Bremen, Germany.

Song, J., & Jung, W. H. (2013). *Effects of the exposure time on the accuracy of an eyewitness.* Poster presented at the Asia-Pacific Conference on Vision, Suzhou, China.

Song, J., Jung, W. H., & Lee, S. (2012). *Effect of age perception and lineup procedure on face recognition.* Poster presented at the European Conference on Visual Perception, Alghero, Italy.

Song, J., & Jung, W. H. (2012). *The effect of color contrast polarity in angle illusion.* Poster presented at the Annual Conference of the Korean Society for Emotion and Sensibility, Korea.

ACADEMIC SERVICE

- Peer-reviewed for Journal of Vision (Impact factor 2.24, H-index 132)

SKILLS

Hardware

- Spectrophotometer (Photo Research 650)
- Eye trackers (EyeLink 1000 Plus, Pupil-labs core eye-tracking headset)

Software

- Programming Languages
  For Experiments:
  - **Python**: Proficient in PsychoPy (+ Pycharm, Spider), QUEST (A Bayesian adaptive psychometric method), OpenGL, OpenCV, SciPy (image/signal processing)
  - **MATLAB**: Skilled in PsychToolbox-3

  For Mathematical/Statistical Analyses:
  - **Python**: Proficient in data handling with NumPy, Pandas, and visualization with Matplotlib, Seaborn
  - **R:** Familiar with ggplot2 (visualization), Minpack.lm (NLS regression), AICcmodavg, flexmix (model comparison), R Markdown (for dynamic reporting).
- Operating Systems
  Windows, Mac, and Linux (with a focus on Ubuntu, command-line multitasking using tmux).

PROJECT EXPERIENCE

University of Georgia, Computer Science (Dr. Jin Sun), *Project Team Member* November 2023 – May 2024

- Involved in the development of an advanced machine learning model leveraging eye movement data from the EGO-EXO4D dataset on the AWS cloud. This project aims to predict visual attention in varied 3D settings, acknowledging how different environments and tasks influence eye movement behavior.
- Employing attention models to accurately interpret eye-tracking data, enhancing the model's predictive accuracy.
- Using TMUX for efficient multitasking in a LINUX environment, enabling simultaneous management of multiple computational processes and data streams.

Laboratory Research Assistant, Chungbuk National University College of Medicine, South Korea 2016

- In the Vision Lab headed by Dr. Yong Sook Goo: Assisted *Ex-vivo* electrophysiology experiments to understand the progression of retinal degenerative diseases and to determine optimum stimulus paradigms for use with retinal prosthetic devices

National Research Foundation of Korea (Interdisciplinary Integrative Project), *Project Team Member* 2014 – 2015

- **Project title:** The psychological approach to the Uncanny Valley in face perception
- Assisted the principal investigator: general management and administrative duties of the project

Ministry of Culture, Sports & Tourism + Korea Culture & Tourism Institute, *Project Team Member* 2014

- Authored a review paper (2014), taking the lead in researching and synthesizing previous findings and knowledge, focusing on the integration of cognitive factors and visual aspects in the context of apology email to dissatisfied tourists.

National Research Foundation of Korea (Interdisciplinary Integrative Project), *Project Team Member* 2012 – 2015

- **Project title:** The scientific approach to the aesthetic experience using the fractal images.
- Conducted an experiment exploring the subjective aesthetic experience of fractals (computer-controlled art images: infinitely complex patterns that are self-similar across different scales), measuring subjective beauty and complexity perceptions of fractals.
- We compared art major students to non-art majors, analyzing their differing responses to fractal images.
- Used MATLAB to code experimental protocols and create fractal images, demonstrating proficiency in computational modeling and experiment design.

National Research Foundation of Korea (Social Science Korea-Basic Research), *Project Team Member* 2012 – 2014

- **Project title:** Discovery of 'Erfahrungstatsache' for judicial fact-finding
- Presented two studies as the lead author at international conferences (ECVP, APCV), focusing on age-related face perception (2012) and the impact of exposure time on eyewitness accuracy (2013).
- Developed experiments using MATLAB, simulating eyewitness testimony scenarios.

TEACHING

Undergraduate Teaching, University of Georgia 2017 – 2024

Instructor of Record

- Research Design in Psychology (PSYC 3980) – Summer 2022

- Effectively instructed students in methods for human behavioral research including experiment, survey, interview, and observation techniques. Emphasized critical understanding of researcher biases and hypothesis testing.

- Sensation and Perception (PSYC 4120) – Fall 2020

- Designed and built all curriculum for sensation and perception (senior-level) course intended for students gaining a general understanding and appreciation of their sensory/perceptual systems.

Teaching Assistant

- Research Analysis in Psychology (PSYC 3990) – Fall 2022, Spring 2021, Spring 2024

- Developed a comprehensive training program for **R**, tailored to students with no prior experience. Used tools like

GroupMe and Github for personalized coaching, achieving 100% proficiency in statistical analysis among students.

- Sensation and Perception (PSYC 4120) – Spring 2023
- Research Design in Psychology (PSYC 3980) – Spring 2022, Summer 2021, Spring 2020, Fall 2019
- Psychopharmacology (PSYC 5850) – Fall 2021
- Elementary Psychology (PSYC 1101) – Spring 2019

AWARDS & HONORS

Graduate Student Travel Grant 2023, 2024
Graduate School, University of Georgia

Walter Isaac Memorial Graduate Student Travel Award 2019
Department of Psychology, University of Georgia

Graduate Student Scholarship (Brain Korea 21 Plus Fellowship Program) 2013 – 2015
Program for Leading University and Student, National Research Foundation of Korea

Student Presentation Award (Poster) 2015
2015 Annual Conference of the Korean Society for Cognitive and Biological Psychology
"*The effect of the thickness of the outlines of the empty squares on the Hermann grid illusion*"

Student Presentation Award (Talk) 2014
2014 Annual Conference of the Korean Society for Cognitive and Biological Psychology
"*Effects of line length, color contrast, and interval of segments in angle perception*"

Undergraduate Student Scholarship 2009 – 2013
Korea Student Aid Foundation

PROFESSIONAL AFFILIATIONS

Vision Sciences Society	2017 – Present
Psychonomic Society	2021 – Present
Human Computer Interaction Korea	2014 – 2017
Korean Society for Cognitive and Biological Psychology	2014 – 2017
Korean Society for Cognitive Science	2013 – 2014
Korean Society for Emotion and Sensibility	2013 – 2014