## BYUNG-IL OH

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**INTERESTS** 

Working memory, Ensemble representation, Computational modeling, Human neuroimaging

**EDUCATION** 

#### Sungkyunkwan University

- B.S. in Psychology & B.S. in Convergence Software

Seoul, Republic of Korea Mar. 2013 – Present

# RESEARCH EXPERIENCES

# **Visual Cognitive Neuroscience Lab**, Sungkyunkwan University *Research Assistant* (Advisor: Prof. Min-Suk Kang)

- Led project on working memory and ensemble representation. Led discussion of neuroimaging decoding. Ran behavioral and EEG experiment. Set up and managed EEG environment and participant pool.

Seoul, Republic of Korea Feb. 2015 – Aug. 2018

#### **Sensorimotor Cognition Laboratory**,

Center for Neuroscience Imaging Research, Institute of Basic Science *Summer Intern* (Advisor: Prof. Jun-Yeol Lee)

- Led pilot project on smooth pursuit eye movement and memory. Ran behavioral experiment with eye-tracker and presented result by poster. Learned basics of MRI and fMRI.

Suwon, Republic of Korea Jun. 2016 – Jul. 2016

#### Functional Brain Mapping Lab,

Center for Neuroscience Imaging Research, Institute of Basic Science *Undergraduate Assistant* (Advisor: Prof. Yunbok Kim)

- Assisted lab environment setting of rodent optical imaging. Observed rat surgery. Participated in lab meeting by giving presentation.

Suwon, Republic of Korea Jun. 2015 – Aug. 2015

### PUBLICATIONS & MANUSCRIPTS IN PROGRESS

- 1. **Oh, B.-I.**, Kim, Y.-J., Kang, M.-S. (submitted). Ensemble representations reveal distinct neural coding of visual working memory.
- 2. Son, G., **Oh, B.-I.**, Kang, M.-S., & Chong, S. C. (under review). Similarity-based clusters are representational units of visual working memory.
- 3. Kang, M.-S. & **Oh**, **B.-I.** (2016). Grouping influences output interference in short-term memory: a mixture modeling study. *Frontiers in Psychology*, 7:585, 1-6.

#### **PRESENTATIONS**

- 1. Kang, M.-S., **Oh, B.-I.**, & Kim, Y. (2018). Neural coding schemes of anterior and posterior brain regions in the formation of cluster representation in visual working memory. Poster presented at the 18th Annual Meeting of the *Society for Neuroscience*, SD., U.S.
- 2. Son, G., **Oh, B.-I.**, Kang, M.-S., & Chong, S. C. (2018). Similarity-based clusters are the representational units of visual working memory. Poster presented at the 18th Annual Meeting of the *Vision Science Society*, St. Pete Beach, FL., U.S.
- 3. **Oh, B.-I.** & Kang, M.-S. (2018). Cluster representation during maintenance in visual working memory. Poster presented at the 18th Annual Meeting of *Korean Society for Cognitive and Biological Psychology*, Suwon, Republic of Korea.
- 4. Son, G., **Oh, B.-I.**, Kang, M.-S., & Chong, S. C. (2018). Similarity-based clusters are the representational units of visual working memory. Poster presented at the 18th Annual Meeting of *Korean Society for Cognitive and Biological Psychology*, Suwon, Republic of Korea.
- 5. **Oh, B.-I.** & Kang, M.-S. (2017). Time is needed for memory to be biased toward an ensemble average. Poster presented at the 17th Annual Meeting of the *Vision Science Society*, St. Pete Beach, FL., U.S. Abstract published in *Journal of Vision*, *17*(10), 350.

MATLAB (Psychtoolbox, EEGLAB, FieldTrip), Python (Psychopy, PyMC) TECHNICAL SKILLS Advanced Moderate R (Stan), C, Java, HTML/CSS, JavaScript, MySQL, Photoshop, Illustrator Beginner C++, C#, PHP, Django, Unity, Arduino Samsung Convergence Software Course Scholarship (~\$3,000) Spring 2015 – Fall 2016 **SCHOLARSHIPS** Korea Student Aid Foundation Scholarship (~\$12,000) Spring 2013 – Fall 2016 Sungkyunkwan University Scholarship (~\$12,000) Spring 2013 – Fall 2016 Seoul, Republic of Korea **TEACHING** Brain, Mind, and Behavior, Sungkyunkwan University Fall 2016 Teaching Mentor **EXPERIENCES** - Gave summary presentation of cognitive neuroscience topics such as neuroimaging method, perception, attention, memory, decision making, social neuroscience to classmate. Seoul, Republic of Korea **Perception**, Sungkyunkwan University Spring 2015 Teaching Mentor - Covered psychometrics, visual, auditory, somatosensory, gustatory perception. Summarized study materials for class buddy. Answered their question and led discussion on topic. **Undergraduate Students Society of Cognitive Psychology**, Seoul, Republic of Korea EXTRA-Jan. 2015 - Dec. 2015 Sungkyunkwan University **CURRICULAR** President ACTIVITIES - Organized society meeting and funding. Programmed experiment and ran statistical analysis. Made decision on project. **Undergraduate Students Society of Cognitive Psychology**, Seoul, Republic of Korea Apr. 2014 - Nov. 2017 Sungkyunkwan University Regular Member - Participated in project on various topic such as working memory, face recognition, time perception, navigation. Ran experiment, wrote paper, gave poster and oral presentation. **Undergraduate Students Society of Data Analysis**, Seoul, Republic of Korea Mar. 2016 – Nov. 2017 Sungkyunkwan University Regular Member - Studied statistics, data analysis, machine learning, R, python. Entered competition of recommendation system. Participated in project on network analysis.

MILITARY SERVICE

**KATUSA** (Korean Augmentation to the United States Army), Republic of Korea Army

Administrative Specialist

- Performed mandatory military service. Worked with Eighth U.S. Army.

Republic of Korea Oct. 2018 – Present

Last Updated: January 10, 2019