**Jonghyun Lee**

jonghyunlee1993.github.io

jonghyunlee1993@gmail.com

**Research Interests**

* Episodic Memory Contextual Process
* Large Scale Brain Connectivity Network
* Protocol Optimization for EPI Data Acquisition
* Cognitive Enhancement Using tES
* Multimodal Imaging Methods

**Education**

**Yonsei University** Seoul, Korea

*B.A. in Korean Language & Literature, Psychology (Double major);* GPA: 4.00/4.30; Aug 2017

(Class Rank: 1/66)

Honors and Awards: Honors, Spring & Fall Semesters, 2015

**Yonsei University** Seoul, Korea

*Graduate Program in Cognitive Science Master’s Course*; GPA: 4.18/4.30 Sep 2017 - Present

**Work Experience**

**Military Service**

Completed Military Service as Private, Republic of Korea ARMY Dec 2012 – Sep 2014

**Research Experience**

**Yonsei University, Psychology Department** Seoul, Korea

*Personality & Social Psychology Lab* Mar 2016 – Dec 2016

*Undergraduate Research Assistant*

* Principal Investigator: Dr. Eunkook Suh

*Brain Cognition Lab of Memory and Decision-Making*

*Undergraduate Research Assistant*  Jan 2017 – Aug 2017

*Master’s Degree Student*  Sep 2017 - Present

* Principal Investigator: Dr. Sanghoon Han
* Thesis: Transcranial direct current stimulation of the hippocampus during episodic memory pattern separation: simultaneous tDCS-fMRI approach
* Collected task based / resting state fMRI data for the development of biomarker for emotional laborers and social anxiety disorder
* Set up high-resolution fMRI protocols and verified the optimal protocol for acquiring hippocampus sub-fields EPI data
* Set up simultaneous fMRI-tDCS protocol to verify the effect of tDCS stimulation using BOLD signal
* Proposed and Implemented WADA alternatives task with fMRI to replace conventional WADA task
* Set up optimal fMRI data acquisition protocol for field-map correction, physiological data denoising
* Various software manual writing out specialized in actual use

**Yonsei University, Institute of Convergence Science**

*ENCOMPASS Team* Mar 2018 - Present

* Principal Investigator: Dr. Sang Yup Lee (Affiliated with Devision of Media and Public Relations)
* Developed model to predict human characteristic using social network service personal photos or text

**Skills and Qualifications**

**Relevant programming skills**

* MATLAB

DPABI(DPARSF), Spider, BASCO, GraphVar, BrainNet Veiwer, EEGlab

* Python

TensorFlow, Matplotlib, Numpy, Pandas, Scikit-learn, , Selenium, NetworkX, NLTK

* R

Lme4, Stan

* Neuro Imaging Software

SPM8/12, FSL, AFNI, Freesurfer, Nilearn, fMRIPrep, PySurfer, Pycortex

* Statistical Software

SPSS, JASP

* Other Tools

Philips MRI Console, SimNIBS, ASHS, Gephi, Bash Shell Scripting, Unity, Arduino, Raspberry Pi

**Relevant coursework taken:**

* **Undergraduate School**

Psychology of Cognitive Engineering (A+)**,** Psychology of Learning & Memory (A+), Introduction to Cognitive Neuroscience (A0), Experimental Methodology in Psychology (A0), Cognitive Psychology (A0), Psychological Statistics (B+)

* **Graduate School**

Topics in Cognitive Science (A+), Psychological Science Colloquim (A+), Machine Learning and Its Application (A+), Neuroscience of Memory & Decision-Making Seminar (A+), Memory and Decision-Making Seminar (A+), Cognitive Modeling Seminar (A+), Principles and Applications of Neuroimaging (A+), Neurophysiology (A0), Advanced Computer Vision (A0), Principles of Psychophysiology (A-), Advanced Topics in Pattern Recognition (in the course), Online Data collections and Analysis (audit), Medical Image Processing (audit)

**Publications**

**Published**

Ahn, J., Lee, J., Han, J. H., Kang, M. S., & Han, S. (2018). Group analysis data representing the effects of frontopolar transcranial direct current stimulation on the default mode network. *Data in brief*, *20*, 1309-1313.

Nah, Y., Lee, J., & Han, S. (2018). Interactivity within large-scale brain network recruited for retrieval of temporally organized events. *Cognitive Science*, *29*(3), 161-192.

**Under Review**

Lee, J., Lee, H., Ahn, J., Min, S., Lee, S., & Han, S., Exploring the Optimal high-resolution EPI protocols to decrease susceptibility-related BOLD signal dropout, *American Journal of Neuroradiology,* under review

**In Preparation**

Lee, J., Park, J., Min, S., Lee, S., & Han, S., Exploring context processing of episodic memory: dissociating backgroud, agent and action based in default mode network, in preparation

Oh, J., Lee, J., Lee, S., & Han, S., Exploring the functional connectivity patterns between hippocampus and amygdala according to arousal evaluation, in preparation

**Poster Presentations**

Lee, J., Lee, H., Ahn, J., Min, S., Lee, S., & Han, S., Exploring the high-resolution EPI fRMI protocol to reduce susceptibility-related BOLD signal dropout, *OHBM 24th annual meeting*, 2018.06, Singapore.

Min, S., Jun, S., Ahn, J., Lee, J., Park, S., Lee, S., & Han, S., Intrinsic functional connectivity in emotion regulation network is altered in emotional laborers, *Neuroscience 48th annual meeting*, 2018.11, San Diego: USA.

Ahn, J., Jun, S., Lee, S., Min, S., Lee, S., Park, S., & Han, S., Altered Emotional Attention and Brain Functional Connectivity Networks of Emotional Laborers, *Neuroscience 48th annual meeting*, 2018.11, San Diego: USA.