

Jinhyeok Jeong

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Education

- Ph.D. in Psychological Sciences, Vanderbilt University, TN, USA 2021.08 – Present
Major: Cognition and Cognitive Neurosciences
Vanderbilt University, TN, USA
Advisor: Dr. Thomas Palmeri
- M.S. in Cognitive Science, Yonsei University, Seoul, Korea 2018.03 – 2020.02
Advisor: Dr. Sang Chul Chong
Thesis: *A study on the mechanism of variance representation in orientation perception*
- B.A. in Psychology, Yonsei University, Seoul, Korea 2012.03 – 2018.02

Research Experience

- Graduate Student Researcher** 2021.08 – Present
Category Laboratory, Vanderbilt University
Working project:
 - Comparing and contrasting cognitive and psychometric modeling approaches
 - Response time modeling for studying decision mechanisms underlying ensemble perception
 - Individual differences and dissociations between recognition and classification
 - The presence and nature of ensemble representations in deep convolutional neural network
 - A computational modeling framework of ensemble perception
- Post-Master Researcher** 2020.03 – 2021.08
Vision, Cognition, and Consciousness Lab, Yonsei University.
Center for Cognitive Science, Yonsei University.
Worked projects:
 - Variability perception of multi-feature objects
 - Influence of task irrelevant global information on the metacognitive judgment
- Graduate Student Researcher** 2018.03 – 2020.02
Vision, Cognition, and Consciousness Lab, Yonsei University.
Worked projects:
 - Weighted computation of orientation variability
 - Interrelationship between the mean and variability perception

Undergraduate Research Assistant

2017.03 – 2018.02

Vision, Cognition, and Consciousness Lab, Yonsei University.

Worked project:

- Sexual difference of cognitive control (ERP study conducted with Dr. Eunsam Shin)

Research Interest

ensemble perception; categorization; perceptual decision making; visual memory; cognitive modeling; mathematical and computational modeling of visual cognition and perception.

Manuscripts in preparation or under review

Chow, J. K., **Jeong, J.**, Bahg, G., Lilburn, S., & Palmeri, T. J. (in preparation). High dimensional spaces. *Manuscript in preparation.*

Jeong, J., Wu, H., & Palmeri, T. J. (in preparation). Comparing and Contrasting Cognitive and Psychometric modeling. *Manuscript in preparation.*

Jeong, J., & Palmeri, T. J. (in preparation). Computational Modeling of Ensemble Perception. *Manuscript in preparation.*

Sun, J., **Jeong, J.**, Cha, O., Gauthier, I., & Palmeri, T. J. (*in preparation*). Relations Between Ensemble Perception and Perceptual Categorization.

Jeong, J., Lee, J., & Chong, S. C. (*in preparation*). The effect of feature types on the predictability between conjoint features in visual ensemble.

Jeong, J., & Chong, S. C. (*under revision*). How people perceive variability of multi-feature objects? *Journal of Experimental Psychology: Human Perception and Performance.*

Publications

Jeong, J., & Chong, S. C. (2021). Perceived variability reflects the reliability of individual items. *Vision Research, 183*, 91-105.

Jeong, J., & Chong, S. C. (2020). Adaptation to mean and variance: Interrelationships between mean and variance representations in orientation perception. *Vision Research, 167*, 46-53.

Conference Presentations

Jeong, J., Palmeri, T. J. (2023, May). *A computational modeling framework for ensemble perception.* Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.

Jeong, J., Chong, S. C. (2021, August). *Variability estimation of multi-feature stimuli.* Poster presented at the 43rd European Conference on Visual Perception (ECVP 2021), Online Meeting.

Kim, K., **Jeong, J.**, Kim, G., & Chong, S. C. (2021, May). *Confidence computation incorporates both*

task-relevant and task-irrelevant noises unlike decision making. Poster presented at the online meeting of the Vision Sciences Society (Virtual-VSS).

Jeong, J., & Chong, S. C. (2020, August). *Mechanism of variance representation in orientation perception*. Talk presented at the online meeting of the Korean society for Cognitive and Biological Psychology.

Jeong, J., & Chong, S. C. (2020, June). *Orientation variability is represented as the weighted standard deviation*. Poster presented at the online meeting of the Vision Sciences Society (Virtual-VSS).

Jeong, J., & Chong, S. C. (2019, May). *Adaptation to mean and variance: interrelationships between mean and variance representations in orientation perception*. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.

Jeong, J., & Chong, S. C. (2019, February). *Mutual influence of mean and variance representations in orientation perception*. Poster presented at the annual meeting of the Korean society for Cognitive and Biological Psychology, Pyeongchang, Korea.

Jeong, J., & Chong, S. C. (2018, June) *The effect of perceived variance on the mean orientation computation*. Poster presented at the annual meeting of the Korean Society for Cognitive Science, Seoul, Korea.

Invited Talks & Speaking Engagements

March 2024. *Theory-driven Response Time Modeling of Ensemble Perception*. Cognition and Cognitive Neuroscience Seminar, Vanderbilt University, Nashville, TN

November 2022. *Computational modeling of ensemble perception*. Cognition and Cognitive Neuroscience Seminar, Vanderbilt University, Nashville, TN

Honors & Awards

Harold Stirling Vanderbilt Award, Vanderbilt University, 2024/8 – 2026/8

Graduate School Travel Awards, Vanderbilt University, 2023

The University Graduate Fellowship, Vanderbilt University, 2021/8 – 2024/7

Merit Thesis Award, Yonsei University, 2020

Student Travel Award, Annual Meeting of the Korean Society for Cognitive Science, 2018

Brain Korea 21+ Scholarship, 2018 – 2020

Yonsei Scholarship for Outstanding Student, 2018 – 2019

Chung-Soo Scholarship (A full-tuition scholarship), 2013, 2016 – 2018

Honors (Fall 2016); High Honors (Fall 2012, Fall 2012); Highest Honors (Spring 2016), Yonsei University

Work Experience

Post-Master Researcher	<i>2020.03 – 2021.08</i>
Center for Cognitive Science, Yonsei University, Seoul, Korea.	
Republic of Korea Air Force (Mandatory Military Service)	<i>2014.01– 2016.01</i>
Military Police of the Republic of Korea Air Force (The 11th Fighter Wing, Daegu, Korea).	

Teaching Experience

Teaching Assistants

Principles of Experimental Design (Prof. Sean Polyn)	<i>2023, Spring</i>
Principles of Experimental Design (Prof. Adriane Seiffert)	<i>2022, Fall</i>
General Psychology (Prof. Ashleigh Maxcey)	<i>2022, Spring</i>
Quantitative Methods (Prof. Adriane Seiffert)	<i>2021, Fall</i>
Introduction to Cognitive Science (Prof. Sang Chul Chong)	<i>2018, 2020</i>
Information Processing Theory (Prof. Sang Chul Chong)	<i>2019</i>

Extracurricular Activities

Academic Workshops

AI summer workshop	<i>2022.5.10 – 6.3</i>
Held by Vanderbilt DSI (Data Science Institute)	
A four-week interactive workshop for learning and applying transformer models to analyze text, audio, and image data.	
Neuromatch Academy 2.0	<i>2020.7.13 – 7.31</i>
Online summer school for computational neuroscience	
Observer tack	
Computational Neuroscience Winter School	<i>2018.2.5 – 2.8</i>
Held by Korean Society for Computational Neuroscience	

Club Activities

Vice President of Korean Graduate Students and Scholars Association (KSSA) at Vanderbilt University 2022.08 – 2023.08

CogSci:IN 2017

Student society for cognitive science at Yonsei University

Founding member of the club

PSYON 2012 – 2013,

Academic club for undergraduate students studying psychology at Yonsei University 2016 – 2017

Participated in weekly journal club (2012-2013, 2016-2017)

Organized journal club, and led MATLAB tutorial session (2017)

Technical Skills

Python / R

MATLAB & Psychophysics Toolbox

JavaScript & jsPsych library

PyTorch / TensorFlow / scikit-learn

JASP / SPSS

JAGS / Stan

Scan 4.3 (Neuroscan) / ERPLAB toolbox

References

Dr. Thomas Palmeri

Distinguished Professor

Department of Psychology, Vanderbilt University

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thomas.j.palmeri@vanderbilt.edu

Dr. Sang Chul Chong

Professor

Department of Psychology, Yonsei University

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