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Engineering & Scientific Consulting

Yu Min Chung, Ph.D.

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Professional Profile

Dr. Chung has expertise in human cognition across the lifespan, with an emphasis on memory, information processing, learning, and language. With a background in cognitive neuroscience, she is experienced in using electrophysiological (e.g., EEG/ERP) and behavioral methods (e.g., eye-tracking) to measure how real-time cognitive processes may impact subsequent behavior. She has also investigated patterns of cognitive development and decline across the lifespan, examining how people at various stages in their lives experience the world.

Dr. Chung applies her education, training, and experience to human factors analyses in both litigation support and proactive technical consulting roles. Dr. Chung assists clients with analyses of scientific literature regarding human factors and risk communication, as well as regulatory and voluntary consensus standards that apply to warnings and instructions.

Dr. Chung received her Ph.D. in Psychology from the University of Illinois Urbana-Champaign where she examined the impact of information value on sentence processing and memory in younger and older adults. Her doctoral research investigated interactions between language and memory in the context of cognitive development and cognitive decline in healthy aging. She examined the downstream consequences of predictive processing on memory in younger and older adults by linking electrophysiological data to behavioral outcomes. Her findings included data patterns suggesting that increasing engagement for important sentence-level information in the moment may paradoxically have a negative impact on subsequent memory. She has also taught several courses in child development and developmental research methodology and has been listed as excellent by her students. She speaks three languages, with native fluency in both English and Korean and N2 proficiency in Japanese. She also has professional experience translating Korean and English materials, both written and spoken.

Academic Credentials & Professional Honors

Ph.D., Psychology, University of Illinois, Urbana-Champaign, 2023

B.A., Psychology and English Language, Seoul National University, Korea, 2016

Teachers Ranked as Excellent by Their Students, Center for Innovation in Teaching & Learning, University of Illinois Urbana Champaign, 2021, 2023

Undergraduate Research Grant (2,657 USD/3,000,00 KRW), Seoul National University, 2015

Full Undergraduate Scholarship, National Humanities and Social Sciences, Korea Student Aid Foundation, 2013-2015

Merit-Based Scholarship (20%), Seoul National University, 2012

Prior Experience

Research Assistant, Sandia National Lab, 2021-2022

Graduate Research/Teaching Assistant, University of Illinois Urbana Champaign, 2016-2023

Professional Affiliations

Member, Society for Psychophysiological Research, 2022 – 2023

Publications

Chung, Y. M. W., & Federmeier, K. D. (2023). Read carefully, because this is important! How value-driven strategies impact sentence memory. Memory & Cognition, 1-16.

Hahn, S., & Chung, Y. (2016). Neuroticism, Attention and Eye Movements. NOVA (Eds.) In Neuroticism: Characteristics, Impact on Job Performance and Health Outcomes (pp. 103-112). NOVA publishers.

Presentations

Chung, Y.W., Federmeier, K.D. (2022). The impact of value on sentence processing and downstream memory: an ERP study. Leading Edge Workshop on Co-registration, Tampa, Florida.

Chung, Y.W., Federmeier, K.D. (2022). The impact of value on sentence processing and downstream memory: an ERP study. Society for Psychophysiological Research (SPR), Vancouver, Canada.

Chung, Y.W., Lai, K. M. (2022). How goals and meaning impact code-reading: an eye-tracking study. University of Illinois LDRD Sandia Mini-Conference. Urbana, Illinois.

Chung, Y.W., (2022). Read carefully, this is important: How value-driven strategies impact sentence processing and memory. Beckman Institute Graduate Student Seminar. Urbana, Illinois.

Project Experience

Examined how young infants acquire word order knowledge and the nature of young children's syntactic knowledge using various behavioral paradigms, including preferential looking

Applied novel methods from the study of eye-movement behaviors in text comprehension to characterize how programmers comprehend python source code