

# Heejung Jung

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## Education

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| <b>Postdoctoral Researcher</b> , Stanford University<br>Laboratory of Behavioral and Cognitive Neuroscience, P.I. Josef Parvizi  | 📅 2024 – present |
| <b>PhD, Cognitive Neuroscience</b> , Dartmouth College<br>Cognitive Affective Neuroscience Lab, P.I. Tor D. Wager                | 📅 2019 – 2024    |
| <b>M.A. in Cognitive Psychology</b> , University of Colorado Boulder<br>Social Neuroscience and Games Lab, P.I. R. McKell Carter | 📅 2015 – 2018    |
| <b>M.S. in Cognitive Psychology</b> , Korea University<br>Lab of Social Decision Neuroscience, P.I. Hackjin Kim                  | 📅 2011 – 2014    |

## Publications and Presentations

### Publications

- **Jung, H.**, Amini, M., Hunt, B. J., Murphy, E. I., Sadil, P., Halchenko, Y. O., Miao, Z., Kragel, P.A., Han, X., Heilicher, M., Petre, B., Collins, O.G., Lindquist, M. A., & Wager, T. D. (2024). A massive multimodal fMRI dataset unifying naturalistic processes with a rich array of experimental tasks. *bioRxiv*. <https://doi.org/10.1101/2024.06.21.599974>
- **Jung, H.**, Yazdanpanah, A., Carter, R. M., Nastase, S., Kragel, P. A., Soltani, A., Lindquist, M. A., & Wager, T. (In Prep). Neural correlates of domain-general and domain-specific effects of expectation on multimodal negative affect.
- Yazdanpanah, A., **Jung, H.**, Soltani, A., Lindquist, M. A., & Wager, T. (In Prep). Reinforcement learning reveals domain-general expectation effect yet task-specific confirmation bias.
- Hayne, L., **Jung, H.**, & Carter, R. (2024). Does representation similarity capture function similarity? *Transactions on Machine Learning Research*. <https://openreview.net/forum?id=YY2iA0hfa>
- **Jung, H.**, Yazdanpanah, A., Soltani, A., & Wager, T. (2023). Divergent effects of expectations on behavior and brain. In *Proceedings of 2023 Conference on Cognitive Computational Neuroscience*. <https://doi.org/10.32470/ccn.2023.1161-0>
- Epp, S., **Jung, H.**, Borghesani, V., Klöwer, M., Hoeppli, M.-E., Misiura, M., Thompson, E., Duncan, N. W., Urai, A. E., Veldsman, M., Sadaghiani, S., & Rae, C. L. (2023). How can we reduce the climate costs of OHBM? A vision for a more sustainable meeting. *Aperture Neuro*, 3, Aug. 2023, 1-16. Organization for Human Brain Mapping. <https://doi.org/10.52294/001c.87678>
- Wager, T. D., & **Jung, H.** (2022). Unpacking placebo and working memory training effects on cognitive performance. *Proceedings of the National Academy of Sciences of the United States of America*, 119(42), <https://doi.org/10.1073/pnas.2214268119>
- **Jung, H.**, Wager, T. D., & Carter, R. M. (2022). Novel Cognitive Functions Arise at the Convergence of Macroscale Gradients. *Journal of Cognitive Neuroscience*, 34(3), 381–396, [https://doi.org/10.1162/jocn\\_a\\_01803](https://doi.org/10.1162/jocn_a_01803)
- Carter, R. M., **Jung, H.**, Reaven, J., Blakeley-Smith, A., Dichter, G. S. (2020). A Nexus Model of Restricted Interests in Autism Spectrum Disorder. *Frontiers in human neuroscience*, 14, 212. <https://doi.org/10.3389/fnhum.2020.00212>
- Lee, Y., Jang J., **Jung, H.**, Kim, H. (2010). The Effect of the Presentation Order of Facial Trustworthiness and Prior Repayment Ratio of Trustees on the Investment Behaviors during Trust Games, *Korean Journal of Consumer and Advertising Psychology*, 11(2), 1-24.

### Conference Presentations

- **Jung, H.**, Yazdanpanah, A., Lindquist, M. A., Soltani, A., & Wager, T. D. (2023, Nov). Discrepant effects of predictive cues on pain-related brain responses and behavior. Poster presented at the 2023 Society for Neuroscience Conference, Washington, DC.
- **Jung, H.** (2023, Jul). How can we reduce the carbon footprint of the OHBM annual meeting? Oral presentation at the 29th Annual Meeting of the Organization for Human Brain Mapping; Montreal, Quebec, Canada.
- **Jung, H.**, Amini, M. Hunt, B.J., Murphy, E. I., Kragel, P. A., Lindquist, M. A., Wager, T. D. (2022, Jun). Searching for brain mediators of expectancy effects on cognitive effort, empathy, and somatic pain. Poster presented at the 28th Annual Meeting of the Organization for Human Brain Mapping; Glasgow, UK.
- **Jung, H.**, Slipski, L., Amini, M., Heilicher, M., Hunt, B., Murphy, E., Han, X., Kragel, P. A., Lindquist, M. A., Wager, T. D. (2021, Nov). Neural Representation of Expectations on Somatic Pain, Vicarious Pain, and Cognitive Effort. Poster presented at the 50th Annual Conference of the Society for Neuroscience; Chicago, IL.

- **Jung, H.**, Mosner, M. G., McLaurin, R. E., Hakimi, S., Parelman, J. M., Kinard, J., Chakraborty, P., Dichter, G. L., & Carter, R. M. (2016, May). Co-opted Social Cognitive Neural Substrates in Autism During Strategic Gameplay. Poster presented at the 71st Annual Scientific Convention and Meeting of Society of Biological Psychiatry, Atlanta, GA.
- **Jung, H.**, Kim, H. (2014, Nov). A Fear of Sticking Out: Role of BNST in Conforming to the Majority. Poster presented at the 2014 Society for Neuroscience Conference, Washington, DC.

## Leadership & Teaching

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### Project lead, *Individualized spatial topology in functional neuroimaging*, Dartmouth College

- Collected novel large scale data with 400 MRI brain scan sessions on NIH-funded project
  - Over the span of 2 years, trained 3 research assistants to operate MRI scanner, execute experiment code, follow experimental protocols, and organize collected data
  - Maintained large scale machinery, including pain-delivery equipment, physiological data equipment, and MRI scanner; flexibly navigated project by adjusting team protocols during Covid-19
  - Implemented best practices for open science and reproducibility, including github package released prior to data collection
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### Lab Instructor, *Graduate-level Data Analysis Course*, University of Colorado Boulder

- Conducted lab sessions for graduate-level Data Analysis course for 4 semesters
  - Taught advanced statistical analysis in R, reviewed statistical concepts, and conducted recitation sessions
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### Member, *Sustainability and environmental action group*, Organization of Human Brain Mapping (OHBM)

- Participated in monthly meetings to discuss both short-term and long-term impacts of green practices on neuroimaging; provided suggestions to OHBM board for sustainable conference planning
- Conducted data analysis on OHBM member flight trajectories; Submitted manuscript to open-access journal with said findings

## Technical Skill

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### Data Science

Multi-level Modeling in R, Data Visualization in Python/R/Matlab, Big Data Neuroimaging Analysis in Python/Matlab

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### Programming Language

Python, R, Matlab

### Other Tools for Data Science

Git, Slurm scheduling for High Performance Computing, Vim, Bash Scripting, Dockerization

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### Tools in Design

Adobe Photoshop, Illustrator, InDesign