

Lea E. Frank, Ph.D.

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Quantitative researcher with a passion for data analysis and storytelling. Background in cognitive neuroscience and specialized knowledge of human memory and generalization. Demonstrated experience in project management, using statistical analysis to draw meaningful insights, connecting findings to broader knowledge, and communicating complex information to technical and non-technical audiences.

EDUCATION

2017 – 2022	Ph.D. in Psychology, Cognitive Neuroscience Area University of Oregon, OR
2017 – 2022	Specialization in Educational Data Science University of Oregon, OR
2016 – 2017	M.S. in Psychology, Cognitive Neuroscience Area University of Oregon, OR
2010 – 2014	B.A. in Psychology Marist College, NY

RESEARCH EXPERIENCE

2016 – Present	Graduate Student PI – Dr. Dagmar Zeithamova Brain and Memory Lab, University of Oregon, OR
2014 –2016	Research Assistant PIs – Drs. Denise Krch & Nancy Chiaravalloti Traumatic Brain Injury Lab, Kessler Foundation, NJ
2014	Intern PIs – Drs. Russell Tobe & Anna MacKay-Brandt Clinical Research Department, Nathan S. Kline Institute, NY
2013 – 2014	Student Research Assistant PI – Dr. Kristin Jay WTF Lab, Marist College, NY

PUBLICATIONS

Journal Articles

Kendrick, R., **Frank, L.E.** & Zeithamova, D. (in prep). Decoding perceived and remembered content in the parietal cortex and ventral temporal cortex.

Frank, L.E. & Zeithamova, D. (in prep). Evaluating methods for removing task-evoked activity when measuring background connectivity.

Frank, L.E. & Zeithamova, D. (in prep). The contribution of anterior and posterior hippocampal connectivity to individual differences in memory specificity and generalization

Frank, L.E.*, Bowman, C.R.*, & Zeithamova, D. (2019). Differential functional connectivity along the long axis of the hippocampus aligns with differential role in memory specificity and generalization. *Journal of Cognitive Neuroscience*, 31(12), 1958-1975.

Frank, L.E., Preston, A.R. & Zeithamova, D. (2019). Functional connectivity between memory and reward centers across task and rest track memory sensitivity to reward. *Cognitive, Affective and Behavioral Neuroscience*, 19(3), 503-522.

Krch, D., **Frank, L.E.**, Chiaravalloti, N.D., Vakil, E., DeLuca, J. (2019). Cognitive reserve protects against memory decrements associated with neuropathology in traumatic brain injury. *Journal of Head Trauma Rehabilitation*, 34(5), E57-E65

Zeithamova, D., Gelman, B.D., **Frank, L.E.** & Preston, A.R. (2018). Abstract representation of prospective reward in the hippocampus. *Journal of Neuroscience*, 38(47), 10093-10101.

* These authors contributed equally to this work.

CONFERENCE PRESENTATIONS

Talks

Frank, L.E. & Zeithamova, D. (2022). The contribution of anterior and posterior hippocampal connectivity to individual differences in memory specificity and generalization. Data blitz presented at the Cognitive Neuroscience Society 29th, San Francisco, CA.

Symposia

Elliott, O.K., Ashby, S.R., **Frank, L.E.**, Iwashita, T. & Zeithamova, D. (2019). Memory specificity in color and location. Presented at the Apprenticeships in Science and Engineering Symposium, Portland, OR.

Posters

Frank, L.E. & Zeithamova, D. (2022). The contribution of anterior and posterior hippocampal connectivity to individual differences in memory specificity and generalization. Poster presented at the Cognitive Neuroscience Society 29th, San Francisco, CA.

Krch, D., **Frank, L.E.** & Weber, E. (2021). PPVT impacted by neuropathology in moderate to severe TBI. Poster presented at the 41st Annual Conference on Neuropsychology and Neurorehabilitation, Washington, D.C.

Frank, L.E. & Zeithamova, D. (2021). Individual differences in anterior and posterior hippocampal connectivity and their relationship to memory specificity and generalization. Poster presented at the 50th Annual Society for Neuroscience Conference, virtual.

Bissert, T., **Frank, L.E.** & Zeithamova, D. (2021). Differential functional connectivity of anterior and posterior hippocampus. Poster presented at the University of Oregon Undergraduate Research Symposium.

Frank, L.E., Ashby, S.R. & Zeithamova, D. (2021). Individual differences in memory generalization. Poster presented at Cognitive Neuroscience Society 28th Annual Meeting, virtual.

Maldonado, C., **Frank, L.E.** & Zeithamova, D. (2020). Memory specificity and generalization: Competing or complementary processes? Poster presented at the University of Oregon Undergraduate Research Symposium.

Kendrick, R., **Frank, L.E.** & Zeithamova, D. (2020). Memory representations contain conceptual and

- perceptual information. Poster presented at the University of Oregon Undergraduate Research Symposium.
- Jackson, R., **Frank, L.E.** & Zeithamova, D. (2020). Augmented reality biofeedback and effects on stress, mood, and measures of memory encoding. Poster presented at the University of Oregon Undergraduate Research Symposium.
- Zhou, S., **Frank, L.E.** & Zeithamova, D. (2019). The effect of absolute value vs. relative value of reward on associative memory. Poster presented at the University of Oregon Psychology Department's Annual Poster Presentation for Honors Student.
- Frank, L.E.**, Bowman, C.R. & Zeithamova, D. (2019). Distinct connectivity patterns of anterior and posterior hippocampus. Poster presented at Cognitive Neuroscience Society 26th Annual Meeting, San Francisco, CA.
- Krch, D., **Frank, L.E.**, Chiaravalloti, N.D., Vakil, E., DeLuca, J. (2019). Cognitive reserve protects against memory decrements associated with neuropathology in traumatic brain injury. Paper presented at the International Neuropsychological Society 47th Annual Meeting, New York, NY.
- Frank, L.E.**, Bowman, C.R. & Zeithamova, D. (2018). Distinct connectivity patterns along the hippocampal anterior-posterior axis. Poster presented at the 48th Annual Society for Neuroscience Conference, San Diego, CA.
- Frank, L.E.**, Zeithamova, D. & Preston, A.R. (2017). Intrinsic connectivity between memory and reward centers predict individual differences in reward-motivated learning. Poster presented at the 47th Annual Society for Neuroscience Conference, Washington, D.C.
- Krch, D. & **Frank, L.E.** (2017). Gender differences in neurobehavioral functioning in chronic TBI. Poster presented at the International Brain Injury Association's 12th World Congress on Brain Injury, New Orleans, LA.
- Frank, L.E.**, Zeithamova, D. & Preston, A.R. (2017). Resting-state medial temporal lobe connectivity with reward centers predicts how motivation impacts learning. Poster presented at Cognitive Neuroscience Society 24th Annual Meeting, San Francisco, CA.
- Krch, D., Ward, I., Lange, B., Kesten, A.G., Cording, C.M., **Frank, L.E.**, Mejia, M., Chervin, K., König, S., Chang, C.Y., Rizzo, A., Jasey, N.J. & Nolan, K.J. (2016). A systematic delivery for multisensory balance impairment using virtual reality in TBI. Poster presented at the American Congress of Rehabilitation Medicine 92nd Annual Conference, Chicago, IL.
- Frank, L.E.** & Jay, K. (2014). Sensory integration in flavor perception. Poster presented at the 68th Annual Eastern Colleges Science Conference, Marist College, Poughkeepsie, NY.
- Frank, L.E.** & Jay, K. (2014). Sensory integration in flavor perception. Poster presented at the Celebration of Undergraduate Research, Scholarship, & Creativity (CURSCA), Marist College, Poughkeepsie, NY.

FELLOWSHIPS, AWARDS AND HONORS

2019	The Psychonomic Society's Best Article of the Year Award for Cognitive, Affective and Behavioral Neuroscience
2019	Peter O'Day Fellowship in Biological Sciences, University of Oregon
2016 – 2019	Annual Psychology Department Travel Award, University of Oregon
2014	Eastern Colleges Science Conference Award of Excellence for outstanding poster
2014	Magna cum laude, Marist College
2013	Vice President for Academic Affairs Student Research Grant
2010 – 2014	Dean's List, Marist College

MENTORSHIP

2021	High school intern through the Apprenticeships in Science and Engineering's Saturday Academy Program
2021	Trevor Bissert, Psychology Program
2020	Ray Jackson, Psychology Honors Program
2020	Celina Maldonado, Psychology Program
2019 – 2020	Rennie Kendrick, Honors College
2018 – 2019	Shijing Zhou, Psychology Honors Program
2018	Neuroimaging workshop for student research assistants and interns

OUTREACH & SERVICE ACTIVITIES

2021, 2022	Planning committee for CascadiaR Conference
2018 – 2022	<i>Mental Time Travel</i> , Annual workshop for Summer Academy to Inspire Learning, Eugene, OR
2018 – 2019	<i>Mental Time Travel</i> , Annual workshop for Apprenticeships in Science and Engineering's Saturday Academy Program, Corvallis, OR
2018 – 2019	Institute of Neuroscience Bootcamp
	Neuroimaging workshop for incoming graduate students, Eugene, OR
2016, 2019	<i>Science Open House</i> , Annual Science Program to Inspire Creativity and Excellence, Eugene, OR
2018	Workshop for <i>Brain Awareness Week</i> at local elementary school, Eugene, OR

TEACHING EXPERIENCE

Fall 2020	Applied Data Analysis (PSY 412/512), lab instructor
Summer 2020	Statistical Methods in Psychology (PSY 302), lab instructor
Spring 2020	Learning & Memory (PSY 433/533), teaching assistant
Winter 2020	Statistical Methods in Psychology (PSY 302), lab instructor
Fall 2019	Applied Data Analysis (PSY 412/512), lab instructor
Winter 2018, Spring 2019	Cognition (PSY 305), teaching assistant
Fall 2018	Applied Data Analysis (PSY 412/512), lab instructor
Fall 2017, Spring 2018	Statistical Methods in Psychology (PSY 302), lab instructor

PROFESSIONAL MEMBERSHIPS

2019 – Present	Psychonomic Society, Student Member
2017 – Present	Society for Neuroscience, Student Member
2016 – Present	Cognitive Neuroscience Society, Student Member
2016 – Present	Women in Graduate Sciences, University of Oregon Chapter
2016 – 2017	Eastern Psychological Association, Associate Member
2013 – 2014	Psi Chi Honor Society in Psychology, Marist College Chapter