ELIZABETH R. CHRASTIL

Department of Neurobiology & Behavior
University of California, Irvine
1420 Biological Sciences III
Irvine, CA 92697

chrastil@uci.edu
(949) 824-6267

Academic Positions

University of California, Irvine

Associate Professor, Department of Neurobiology & Behavior	2023-present
Fellow, Center for the Neurobiology of Learning & Memory	2019-present
Member, Center for Neural Circuit Mapping	2020-present
Member, Center for Integrative Movement Sciences	2021-present
Affiliate, Department of Cognitive Sciences	2021-present
Member, Center for Complex Biological Systems	2021-present
Assistant Professor, Department of Neurobiology & Behavior	2019-2023

University of California, Santa Barbara

Assistant Professor, Department of Geography	2016-2019
Faculty, Graduate Program in Dynamical Neuroscience	2016-2019
Affiliate, Neuroscience Research Institute	2016-2019
Affiliate, Cognitive Science Program	2016-2019
Affiliate, Department of Psychological & Brain Sciences	2017-2019
Associate Director, Research Center for Virtual Environments & Behavior	2018-2019

Boston University

Postdoctoral Research Associate 2012-2016
Postdoctoral Advisor: Chantal E. Stern, D.Phil.

Education

Brown University

Ph.D., Cognitive Science 2012
Dissertation Advisor: William H. Warren, Ph.D.

Tufts University

M.S., Biology 2006

Washington University in St. Louis

B.A., Philosophy-Neuroscience-Psychology and History, with honors 2002

Grants and Fellowships

Current Funding

National Institutes of Health/NINDS R01 ($1,489,577 total costs) 2023-2027
Role: MPI (MPIs Jeff Krichmar, Doug Nitz)
"CRCNS: There and back again – Linking global maps to first-person perspectives"

National Institutes of Health/NINDS R01 ($2,549,541 total costs) 2022-2027
Role: PI (co-Investigators Aaron Bornstein, Jean Carlson)
"Navigational learning and memory: Cognitive graphs, active decision making, and brain network dynamics"

Neurobiology & Behavior Pilot Grants ($10,000 total costs) 2022-2023
Role: PI
"Tracking risk for Alzheimer's Disease using navigation ability"

UCI MIND ($100,000 direct costs) 2022-2023
Role: PI
"Spatial exploration behavior: A novel cognitive marker for Alzheimer's Disease?"
National Science Foundation BRAIN Initiative ($996,438 total costs
+ $23,200 REU Supplement) 2020-2023
Integrative Strategies for Understanding Neural and Cognitive Systems – Foundations
Role: PI (co-PIs Jeff Krichmar, Craig Stark, Mary Hegarty)
"Advantages of varying navigational abilities in humans and robots"
National Science Foundation ($491,295 total costs + $11,600 REU Supplement) 2019-2022
Role: PI
"Cognitive graphs: The geometry of spatial knowledge"
National Science Foundation ($669,803 total costs, $216,783 to Chrastil) 2018-2021
Role: co-PI (PI Chantal Stern, co-PI Sam Ling)
"Functional organization of navigational coding in the human brain"

Completed Funding

UCI MIND/Women's Alzheimer's Movement ($100,000 direct costs) 2020-2021
Role: PI
"Sex differences in spatial navigation during aging"
Institute for Collaborative Biotechnologies (Army Research, $217,000 total) 2018-2019
Role: PI
"Neural biomarkers of individual differences in navigational abilities"
UCSB Crossroads Graduate Division (4 quarters graduate student support) 2018-2020
Role: PI (co-PIs Emily Jacobs, Mary Hegarty, Steve Gaulin)
"Spatial navigation, sex differences, and aging: From cells to society"
California NanoSystems Institute New Partnerships Challenge Grant ($49,980) 2018-2019
Role: Co-Lead Investigator (co-Lead Emily Jacobs, co-I Mary Hegarty)
"Spatial navigation, sex hormones, and the aging brain"
UCSB Hellman Family Faculty Fellowship ($47,571) 2018-2020
"Individual differences in navigation ability as an early marker for mental disorders"
UCSB Senate Faculty Research Grant ($14,100) 2018-2019
"Spatial navigation in human aging"
Institute for Collaborative Biotechnologies (Army Research Office) 2018-2019
Seed Fund ($60,000)
UCSB Regents Junior Faculty Fellowship ($7,500) 2018
"Common neural representations of spatial, temporal, and social distance in the human hippocampus"
UCSB Senate Faculty Research Grant ($10,000) 2017-2018
"Domain-general processing in the human brain"
Brown University Dissertation Fellowship 2010-2011
NASA/RI Space Grant Fellowship 2008-2009
Brown University First Year Fellowship 2006-2007

Publications

Montello, D.M., Davis, R.C., Johnson, M., & **Chrastil, E.R.** (2023). The symmetry and asymmetry of pedestrian route choice. *Journal of Environmental Psychology, 87*, 102004

Chrastil, E.R. (2023). Human path integration and the neural underpinnings. *Reference Module in Neuroscience and Biobehavioral Psychology.* Edited chapter.

Alexander, A.S.*, Place, R.*, Starrett, M.J.*, **Chrastil, E.R.**†, & Nitz, D.A.† (2023). Rethinking retrosplenial cortex: Perspectives and predictions. *Neuron, 111*(2), 150-175.
* denotes equal authorship † indicates co-senior and co-corresponding authors

Hegarty, M., He, C., Boone, A.P., Yu, S., Jacobs, E.G., & **Chrastil, E.R.** (2023). Understanding differences in wayfinding strategies. *Topics in Cognitive Science, 15*(1), 102-119.

Cheng, Y.*, He, C.*, Hegarty, M., & **Chrastil, E.R.** (2022). Who believes they are good navigators? A machine learning pipeline highlights the impact of gender, commuting time, and education. *Machine Learning with Applications, 10,* 100419. *Editor's Choice*
* denotes equal authorship

Xing, J., **Chrastil, E.R.**, Nitz, D.A., & Krichmar, J.L. (2022). Linking global top-down views to first-person views in the brain. *Proceedings of the National Academy of Science, 119*(45), e2202024119.

He, C., **Chrastil, E.R.**, & Hegarty, M. (2022). A new psychometric task measuring spatial perspective taking in ambulatory virtual reality. *Frontiers in Virtual Reality, 3,* 971502.

Chrastil, E.R., Rice, C., Goncalves, M., Moore, K., Wynn, S.C., Stern, C.E., & Nyhus, E. (2022). Theta oscillations support active exploration in human spatial navigation. *NeuroImage, 262,* 119581.

Munns, M.E., Tranquada-Torres, B., **Chrastil, E.R.**, & Hegarty, M. (2022). Large-scale vs. small-scale spatial activities: Development of a broad spatial activities questionnaire. *Proceedings of the Cognitive Science Society Annual Meeting, 44,* 1079-1086.

Chrastil, E.R., & Cheng, Y. (in press). Central coordination and integration of diverse information to form a single map. Peer-reviewed book chapter.

Gunalp, P., **Chrastil, E.R.,** & Hegarty, M. (2021). Directionality eclipses agency: How both directional and social cues improve spatial perspective taking. *Psychonomic Bulletin & Review 28*(4), 1289-1300.

Yu, S., Boone, A.P., He., C., Davis, R.C., Hegarty, M.*, **Chrastil, E.R.***, & Jacobs, E.G.* (2021). Age-related changes in spatial navigation are evident by midlife and differ by sex. *Psychological Science 32*(5), 692-704. *Featured Article*
* indicates co-senior and corresponding authors

Chrastil, E.R., & Warren, W.H. (2021). Executing the homebound path is a major source of error in homing by path integration. *Journal of Experimental Psychology: Human Perception and Performance 47*(1), 13-35*.*

Cheng, Y., Hegarty, M., & **Chrastil, E.R.** (2020). Telling right from right: The influence of handedness in the mental rotation of hands. *Cognitive Research: Principles and Implications 5,* Article number 25.

Ericson, J.D., **Chrastil, E.R.**, & Warren, W.H. (2021). Space syntax visibility graph analysis is not robust to changes in spatial and temporal resolution. *Environment and Planning B: Urban Analytics and City Science 48*(6), 1478-1494.

Chrastil, E.R., Nicora, G.L., & Huang, A. (2019). Vision and body-based cues make equal contributions to path integration in a novel homing task. *Cognition 192,* 103998.

Brown, T.I., & **Chrastil, E.R.** (2019). Editorial: Spatial navigation: Memory mechanisms and executive function interactions. *Frontiers in Human Neuroscience 13*, 202.

Izen, S.*, **Chrastil, E.R.***, & Stern, C.E. (2018). Resting state connectivity between medial temporal lobe regions and intrinsic cortical networks predicts performance in a path integration task. *Frontiers in Human Neuroscience 12*, 415.
* denotes equal authorship

Chrastil, E. R.*, Tobyne, S. M.*, Nauer, R. K., Chang, A. E., & Stern, C.E. (2018). Converging meta-analytic and connectomic evidence for functional sub-regions within the human retrosplenial region. *Behavioral Neuroscience 132,* 339-355.
* denotes equal authorship

Chrastil, E.R. (2018). Heterogeneity in human retrosplenial cortex: A review of function and connectivity. *Behavioral Neuroscience 132,* 317-338.

Sherrill, K.R., **Chrastil, E.R.**, Aselcioglu, I., Hasselmo, M.E., & Stern, C.E. (2018). Structural differences in hippocampal and entorhinal gray matter volume support individual differences in first-person navigational ability. *Neuroscience 380*, 123-131.

Chrastil, E.R., & Warren, W.H. (2017). Rotational error in path integration: Encoding and execution errors in angle reproduction. *Experimental Brain Research 235*, 1885-1897.

Chrastil, E. R., Sherrill, K.R., Aselcioglu, I., Hasselmo, M.E., & Stern, C.E. (2017). Individual differences in human path integration abilities correlate with gray matter volume in retrosplenial cortex, hippocampus, and medial prefrontal cortex. *eNeuro, 4*(2), e0346-16.2017, 1-14.

Chrastil, E. R., Sherrill, K.R., Hasselmo, M.E., & Stern, C.E. (2016). Which way and how far? Tracking of translation and rotation information for human path integration. *Human Brain Mapping, 37*, 3636-3655.

Chrastil, E. R., Sherrill, K.R., Hasselmo, M.E., & Stern, C.E. (2015). There and back again: Hippocampus and retrosplenial cortex track homing distance during human path integration. *Journal of Neuroscience, 35*(46), 15442-15452.

Chrastil, E.R., & Warren, W. H. (2015). Active and passive spatial learning in human navigation: Acquisition of graph knowledge. *Journal of Experimental Psychology: Learning, Memory, & Cognition, 41*(4), 1162-1178.

Sherrill, K.R., **Chrastil, E.R.**, Ross, R.S., Erdem, U.M., Hasselmo, M.E., & Stern, C.E. (2015). Functional connections between optic flow areas and navigationally responsive brain regions during goal-directed navigation. *NeuroImage, 118*, 386-396.

Chrastil, E.R., & Warren, W.H. (2014). From cognitive maps to cognitive graphs. *PLOS ONE, 9* (11), e112544.

Connors, E.C., **Chrastil, E.R.**, Sanchez, J., & Merebet, L.B. (2014). Virtual environments for the transfer of navigation skills in the blind: A comparison of directed instruction vs. video game based learning approaches. *Frontiers in Human Neuroscience, 8*, Article 223, 1-13.

Connors, E.C., **Chrastil, E.R.**, Sanchez, J., & Merebet, L.B. (2014). Action video game play and transfer of navigation and spatial cognition skills in early blind adolescents. *Frontiers in Human Neuroscience, 8*, Article 133, 1-8.

Chrastil, E.R., & Warren, W.H. (2014). Does the human odometer use an extrinsic or intrinsic metric? *Attention, Perception, and Psychophysics, 76*(1), 230-246.

Chrastil, E.R., & Warren, W.H. (2013). Active and passive spatial learning in human navigation: Acquisition of survey knowledge. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 39*(5), 1520-1537.

Chrastil, E.R. (2013). Neural evidence supports a novel framework for spatial navigation. *Psychonomic Bulletin & Review, 20*, 208-227.

Chrastil, E.R., & Warren, W.H. (2012). Active and passive contributions to spatial learning. *Psychonomic Bulletin & Review, 19*, 1-23.

Chrastil, E.R., Getz, W.M., Euler, H.A., & Starks, P.T. (2006). Paternity uncertainty overrides sex chromosome selection for preferential grandparenting. *Evolution and Human Behavior, 27*(3), 206-223.

Yarkoni, T., Gray, J.R., **Chrastil, E.R.**, Barch, D.M., Green, L., & Braver, T.S. (2005). Sustained neural activity associated with cognitive control during temporally extended decision making. *Cognitive Brain Research, 23*, 71-84.

Manuscripts under Review

Cheng, Y., Ling, S., Stern, C.E., Huang, A. & **Chrastil, E.R.** (under review). Navigational systems in the human brain dynamically code for past, present, and future trajectories.

Pritchet, L., Taylor, C.M., Cossio, D., Santander, T., Grotzinger, H., Faskowitz, J., Handwerker, D.A., Layher, E., **Chrastil, E.R.***, & Jacobs, E.G.* (under review). Neuroanatomical changes observed over the course of a human pregnancy. * indicates co-senior and corresponding authors

Yoo, J., **Chrastil, E.R.**, & Bornstein (under review). Cognitive graphs: Representational substrates for planning.

Cheng, Y., Ling, S., Stern, C.E., Huang, A. & **Chrastil, E.R.** (in revision). Evidence for a travel direction signal in humans that is independent of head direction.

Puthusseryppady, V., Cossio, D., Yu, S., Rezwana, F., Hegary, M.*, Jacobs, E.G.*, & **Chrastil, E.R.*** (under review). Less spatial exploration is associated with poorer spatial memory in midlife adults. * indicates co-senior and corresponding authors

Yu, S., Hegarty, M.*, **Chrastil, E.R.***, & Jacobs, E.G.* (in revision). Endocrine aging is tied to navigation strategy preference in women. * indicates co-senior and corresponding authors

Chrastil, E.R., He, C., Tu, A.S., Munns, M.E., Hatamian, N., Starrett Ambrose, M.J., Rashidi, F., Stark, C.E.L., Krichmar, J.L., & Hegarty, M. (preregistration). Individual differences in navigation ability: Representations, predictors, and strategies.

Invited Talks

Southern California Alzheimer's Disease Research Conference (August 2023). "Sex differences in spatial navigation during early aging and AD."

UCI Alzheimer's Disease Research Center (February 2023). "Spatial navigation as a window into Alzheimer's Disease risk."

Bielefeld University (Germany) Brain & Behavior Seminar (February 2023). "Spatial navigation as a window into human learning and memory."

Indiana University, Cyberinfrastructure for Network Science Colloquium (October 2022). "Immersive virtual reality, active learning, and spatial navigation."

UCI Center for Neural Circuit Mapping Conference (August 2022). "Circuits for travel direction and head direction in human navigation."

Interdisciplinary Navigation Symposium (iNAV) (June 2022, virtual). "Individual differences in human navigation abilities."

UCI Center for the Neurobiology of Learning & Memory Spring Meeting (May 2022). "The representation of spatial knowledge: From cognitive maps to cognitive graphs"

UCI Center for Complex Biological Systems New Faces in Systems Biology (April 2022). "Navigational learning and memory for human spatial navigation."

University of Florida, Weisberg Lab Group (April 2022, virtual). "Individual differences in navigation ability: Brain and behavior."

University of Zurich, GIScience Colloquium (March 2022, virtual). "Individual differences in navigational learning and memory."

Irvine Brain Bee, Keynote speaker (March 2022). "Individual differences in our spatial navigation abilities"

Colby College Psychology Department Seminar (February 2022, virtual). "Individual differences in navigation ability: Brain and behavior."

UCI MIND seminar series (February 2021, virtual). "Using spatial navigation to understand human learning and memory."

Riga Stradins University Interdisciplinary Seminar in Cognitive Sciences (December 2021, virtual). "Individual differences in navigation ability: Brain and behavior."

University of Arizona Cognitive Science Seminar (January 2021, virtual). "Using spatial navigation to understand human learning and memory."

Charles University Prague and Technical University Liberec Interdisciplinary Seminar of Topological Study (January 2021, virtual). "Cognitive graphs: The geometry of spatial knowledge."

USC Center for Intelligent Environments Workshop on HBI, Los Angeles CA (May 2019). "Virtual environments and human navigation."

UCSB Media, Arts, & Technology seminar, Santa Barbara CA (November 2018). "Connecting neuroscience and virtual reality to understand human navigation."

UCLA Center for Behavior, Evolution, & Culture, Los Angeles CA (October 2018). "Spatial knowledge, the environment, and individual differences in navigation ability."

UCSB Kavli Institute for Theoretical Physics, workshop on sensory navigation, Santa Barbara CA (August 2018). "Brain and behavior underlying human spatial navigation."

US Army Research Institute of Environmental Medicine, Natick MA (August 2018). "Neurobiology of wayfinding and considerations of research on wayfinding in subterranean environments."

Interdisciplinary Navigation Symposium (iNAV), Mont Tremblant QC Canada (June 2018). "Perceptual inputs and neural mechanisms of human path integration."

UCLA, Southern California Learning & Memory Symposium, Los Angeles CA (May 2018). "Using spatial navigation to understand learning and memory."

San Diego State University, Department of Geography colloquium, San Diego CA (March 2018). "Connecting neuroscience and virtual reality to understand human navigation."

California Workshop on Evolutionary Social Sciences, San Luis Obispo CA (May 2017). "Spatial knowledge, the environment, and individual differences in navigation ability."

Brown University, Department of Cognitive, Linguistic, & Psychological Sciences, Perception-Action seminar, Providence RI (April 2017). "Brain and behavior supporting spatial knowledge and individual differences in human navigation."

Bowdoin College, Departments of Psychology and Neuroscience, Brunswick ME (December 2015). "Understanding space: Acquiring and using spatial knowledge in human navigation."

Schepens Eye Research Institute, Boston MA (April 2012). "What is the difference between active and passive navigation?"

Conference Presentations

Chrastil, E.R. (2023). "Navigational systems in the human brain dynamically code for past, present, and future trajectories," Open paper talk, Memory Disorders Research Society meeting.

Grotzinger, H., Pritschet, L., Taylor, C., Santander, T., **Chrastil, E.R.**, & Jacobs, E.G. (2023). "Increases in sex steroid hormone across gestation tied to variation in functional connectivity in a densely-sampled woman," Poster, Organization for the Study of Sex Differences annual meeting.

Rezwana, F., Puthusseryppady, V., Yu, S., Hegarty, M., Jacobs, E.G., & **Chrastil, E.R.** (2023). "Temporal dynamics of spatial exploration behavior and its impact on spatial memory in midlife and young adults," Poster, UCI Undergraduate Research Opportunities Program Symposium.

Le, T., Starrett Ambrose, M.J., Puthusseryppady, V., & **Chrastil, E.R.** (2023). "Exploring the prospective effects of making explicit predictions in active and passive spatial graph learning," Poster, UCI Undergraduate Research Opportunities Program Symposium.

Cooper, O.C., He, C., Rashidi, M., Hegarty, M., & **Chrastil, E.R.** (2023). "Walking out of time: Comparing time estimation and spatial navigation abilities," Poster, UCI Undergraduate Research Opportunities Program Symposium.

Kapogianis, T., Bornstein, A., & **Chrastil, E.R.** (2023). "Graph metrics and non-spatial navigational learning," Poster, LEARNMEM2023.

Le, T., Starrett Ambrose, M.J., Puthusseryppady, V., & **Chrastil, E.R.** (2023). "Exploring the prospective effects of making explicit predictions in active and passive spatial graph learning," Poster, LEARNMEM2023.

Starrett Ambrose, M.J., Cheng, Y., Davis, R.C., Tranquada-Torres, B., & **Chrastil, E.R.** (2023). "Domain generality and specificity across egocentric and allocentric distance ratings," Poster, LEARNMEM2023.

Puthusseryppady, V., Cossio, D., Hegarty, M., Jacobs, E.G., & **Chrastil, E.R.** (2023). "Changes to spatial exploration behavior and its impact on spatial memory in early aging," Poster, LEARNMEM2023.

Cooper, O.C., He, C., Rashidi, M., Hegarty, M., & **Chrastil, E.R.** (2023). "Walking out of time: Comparing time estimation and spatial navigation abilities," Poster, LEARNMEM2023.

Kaushik, N., Tu, A.S., Hegarty, M., & **Chrastil, E.R.** (2023). "Individual differences in navigation: Survey and graph knowledge," Poster, LEARNMEM2023.

Krohn, N., Cossio, D.M., & **Chrastil, E.R.** (2023). "Microstructural properties of the human brain and how they relate to individual differences in path integration," Poster, LEARNMEM2023.

Rashidi, M., Hegarty, M., & **Chrastil, E.R.** (2023). "The role of chronic stress in spatial learning in humans," Poster, LEARNMEM2023.

Chi, L., Starrett Ambrose, M.J., & **Chrastil, E.R.** (2023). “Probing labeled graph knowledge in navigational behavior,” Poster, LEARNMEM2023.

Ward, E., Carlson, J., & **Chrastil, E.R.** (2023). “Exploration behaviors differ by sex and predict spatial memory,” Poster, LEARNMEM2023.

Cossio, D., Sabur, R., Yu, S., Hegarty, M., Jacobs, E.G., & **Chrastil, E.R.** (2023). “The relationship between spatial navigation abilities and white matter structural integrity in midlife adults,” Poster, LEARNMEM2023.

Tu, A.S., Krohn, N., Cooper, O., McIntyre, C., & **Chrastil, E.R.** (2023). “The relationship between hippocampal subfield volumes and individual differences in navigation,” Poster, LEARNMEM2023.

Chrastil, E.R. (2023). “Individual differences in human navigation ability: Interactions between brain structure and function,” Open paper talk, LEARNMEM2023.

Puthusseryppady, V., Cossio, D., Hegarty, M., Jacobs, E.G., & **Chrastil, E.R.** (2023). “Changes to spatial exploration behavior and its impact on spatial memory in early aging,” Poster, UCI Re-MIND Emerging Scientists Symposium. *Winner, best poster, postdoc category*

Pritschet, L., Taylor, C., Cossio, D., Grotzinger, H., Santander, T., Layher, E., **Chrastil, E.R.**, & Jacobs, E.G. (2023). “Brain structure changes observed over the course of a human pregnancy – a dense-sampling study,” Poster, Cognitive Neuroscience Society annual meeting.

Taylor, C., **Chrastil, E.R.**, & Jacobs, E.G. (2023). “Medial temporal subregion volume changes observed over the course of a human pregnancy,” Talk, Society for Research in Child Development annual meeting.

Carlson, J., Ward, E., Woodry, R., & **Chrastil, E.R.** (2023). “Brain network dynamics for navigational learning and memory,” Talk, American Physical Society annual meeting.

Chrastil, E.R. (2023). “Human retrosplenial cortex in route-centered coordinate frames,” Talk, Park City Winter Conference on Learning and Memory.

Chrastil, E.R. (2022). “Dynamic brain network interactions during human navigational learning,” Mini-symposium talk, Society for Neuroscience annual meeting.

Cheng, Y., Ling, S., Stern, C.E., & **Chrastil, E.R.** (2022). “Evidence for a distributed head direction and travel trajectory system in the human brain during active navigation,” Talk, Society for Neuroscience annual meeting.

Tu, A.S., Krohn, N., Cooper, O., McIntyre, C., & **Chrastil, E.R.** (2022). “The relationship between hippocampal subfield volumes and individual differences in navigation ability,” Poster, Society for Neuroscience annual meeting.

Ward, E., Woodry, R., Carlson, J., & **Chrastil, E.R.** (2022). “Brain network dynamics for navigational learning and memory,” Poster, Society for Neuroscience annual meeting.

Dunne, M.F., Ling, S., Moore, K.N., Morin, T.M., **Chrastil, E.R.**, & Stern, C.E. (2022). “Egocentric boundary sensitivity using a virtual open field foraging paradigm,” Poster, Society for Neuroscience annual meeting.

Cossio, D., Yu, S., Hegarty, M., Jacobs, E.G., **Chrastil, E.R.** (2022). “The relationship between spatial navigation ability during midlife and white matter structural integrity,” Poster, Society for Neuroscience annual meeting.

Puthusseryppady, V., Cossio, D., Hegarty, M., Jacobs, E.G., & **Chrastil, E.R.** (2022). “Changes to spatial exploration behavior are associated with spatial memory declines in early aging,” Poster, Society for Neuroscience annual meeting.

Starrett Ambrose, M.J., Cheng, Y., Davis, R.C., Tranquada-Torres, B., & **Chrastil, E.R.** (2022). “Domain generality and specificity across egocentric and allocentric distance ratings,” Poster, Society for Neuroscience annual meeting.

Kapogianis, T., Bornstein, A., **Chrastil, E.R.** (2022). “Graph metrics and non-spatial navigational learning,” Poster, Society for Neuroscience annual meeting.

Munns, M.E., Tranquada-Torres, B., **Chrastil, E.R.**, & Hegarty, M. (2022). “Large-scale vs. small-scale spatial abilities: Development of a broad spatial activities questionnaire”, Talk, Cognitive Sciences Society annual meeting.

Cheng, Y., **Chrastil, E.R.**, & Krichmar, J. (2022). “A recurrent neural network model of travel direction in humans”, Poster, Women in Machine Learning UnWorkshop, International Conference on Machine Learning (virtual).

Starrett Ambrose, M.J., Rao, Y., Chi, L., Abarham, A., & **Chrastil, E.R.** (2022). “Graph properties influence route selection for equidistant paths”, Poster, Interdisciplinary Navigation Symposium (iNAV).

Puthusseryppady, V., Cossio, D., Hegarty, M., Jacobs, E.G., & **Chrastil, E.R.** (2022). “Changes in spatial exploration patterns in early aging are associated with declines in spatial memory”, Poster, Interdisciplinary Navigation Symposium (iNAV).

Tu, A., Krohn, N., Cooper, O., McIntyre, C., & **Chrastil, E.R.** (2022). “The relationship between hippocampal subfield volumes and individual differences in navigation ability”, Poster, Interdisciplinary Navigation Symposium (iNAV).

Cheng, Y., **Chrastil, E.R.**, & Krichmar, J. (2022). “A recurrent neural network model of travel direction in humans”, Poster, Interdisciplinary Navigation Symposium (iNAV).

Santos de Leon, S., Starrett Ambrose, M.J., & **Chrastil, E.R.** (2022). “Processing goal-directed navigation.” Poster, UCI Center for the Neurobiology of Learning & Memory Spring Meeting.

Rao, Y., Chi, L., Abarham, A., Starrett Ambrose, M.J., & **Chrastil, E.R.** (2022). “Contrasting turns and metric distance in topological space”, Poster, UCI Undergraduate Research Opportunities Program Symposium.

Shaikh, S., Puthusseryppady, V., & **Chrastil, E.R.** (2022). “Impact of spatial exploration patterns on spatial navigation ability in young adults”, Poster, UCI Undergraduate Research Opportunities Program Symposium.

Yu, S., Hegarty, M., **Chrastil, E.R.**, & Jacobs, E.G. (2022). “Navigation strategy tied to sex steroid hormones”, Poster, Organization for the Study of Sex Differences annual conference.

Puthusseryppady, V., Cossio, D., & **Chrastil, E.R.** (2022). “Alterations to spatial exploration patterns in early aging”, Poster, UCI Emerging Scientists Annual Symposium.

Tu, A., Krohn, N., Cooper, O., McIntyre, C., & **Chrastil, E.R.** (2022). “The relationship between hippocampal subfield volumes and individual differences in navigation”, Poster, Cognitive Neuroscience Society annual meeting.

Puthusseryppady, V., Cossio, D., & **Chrastil, E.R.** (2022). “Alterations to spatial exploration patterns in early aging”, Poster, UCI Postdoctoral Scholar Annual Research Symposium.

Cheng, Y., & **Chrastil, E.R.** (2021). “Sex differences in head direction signals when learning a complex environment”, Data Blitz Talk, NeuroMatch Conference (virtual).

Tu, A., McIntyre, C., & **Chrastil, E.R.** (2021). “The relationship between hippocampal subfield volumes and navigation ability”, Poster, UCI Environmental Research Poster Symposium

Tu, A., McIntyre, C., & **Chrastil, E.R.** (2021). “The relationship between hippocampal subfield volumes and navigation ability”, Poster, Harvard Women in Psychology Annual Trends in Psychology Summit (TiPS) (virtual).

Cheng, Y., Ling, S., Stern, C.E., Huang, A., & **Chrastil, E.R.** (2021). “Travel direction as a fundamental component of human navigation”, Poster, Harvard Women in Psychology Annual Trends in Psychology Summit (TiPS) (virtual).

Tu, A., McIntyre, C., & **Chrastil, E.R.** (2021). “The relationship between hippocampal subfield volumes and navigation ability”, Poster, Society for Neuroscience annual meeting (virtual).

Cheng, Y., & **Chrastil, E.R.** (2021). “Sex differences in head direction signals when learning a complex environment”, Poster, Society for Neuroscience annual meeting (virtual).

Hatamian, N., Woodry, R., Tranquada-Torres, B., Ye, A., & **Chrastil, E.R.** (2021). “The relationship between navigation abilities and mental disorders”, Poster, Society for Neuroscience annual meeting (virtual).

Cheng, Y.*, He, C.*, Spiers, H.J., Coutrout, A., Hornberger, M., Hegarty, M., & **Chrastil, E.R.** (2021). “Self-evaluations of navigation ability: A big data approach”, Poster, Psychonomic Society annual meeting (virtual). *Equal contribution of authors

Tu, A., & **Chrastil, E.R.** (2021). “The relationship between hippocampal subfield volumes and navigation ability”, Talk, Spatial Cognition (virtual). * Winner, Christian Freksa best talk award

Lawson, K., Woodry, R., & **Chrastil, E.R.** (2021). “Does exploration behavior explain navigation performance?” Talk, Spatial Cognition (virtual).

Cheng, Y., & **Chrastil, E.R.** (2021). “Head direction signals during navigation: Comparing movement and stationary periods”, Poster, Spatial Cognition (virtual).

Hatamian, N., Woodry, R., Tranquada-Torres, B., Ye, A., & **Chrastil, E.R.** (2021). “The relationship between navigation abilities and mental disorders”, Poster, Spatial Cognition (virtual).

Chrastil, E.R., Krichmar, J.L., Hegarty, M., & Stark, C.E.L. (2021). “Advantages of varying navigational abilities in humans and robots”, Poster, BRAIN Initiative Investigators annual meeting (virtual).

Cheng, Y., & **Chrastil, E.R.** (2021). “The emergence of head direction signals in a complex environment”, Poster, Organization for Human Brain Mapping annual meeting (virtual).

Cheng, Y., & **Chrastil, E.R.** (2021). “The emergence of head direction signals in human navigation”, Poster, spatial@ucsb.global2021 (virtual).

Chrastil, E.R. (2021) “Theta oscillations support active exploration in human spatial navigation”, Talk, UCI Center for the Neurobiology of Learning & Memory Spring Meeting (virtual).

Cheng, Y., & **Chrastil, E.R.** (2021). “The emergence of head direction signals in human navigation”, Data Blitz Talk, UCI Center for the Neurobiology of Learning & Memory Spring Meeting (virtual).

Cheng, Y., & **Chrastil, E.R.** (2021). “The emergence of head direction signals in human navigation”, Talk, UCI Associated Graduate Students Symposium. * Winner, Audience Choice Award

Cheng, Y., & **Chrastil, E.R.** (2021). “The emergence of head direction signals in human navigation”, Poster, Cognitive Neuroscience Society annual meeting (virtual).

Woodry, R., & **Chrastil, E.R.** (2021). “Functional connectivity profiles predict trial-by-trial success in a navigation task”, Poster, Cognitive Neuroscience Society annual meeting (virtual).

Hatamian, N., Woodry, R., Tranquada-Torres, B., Ye, A., & **Chrastil, E.R.** (2021). “The relationship between navigation abilities and mental disorders”, Poster, Cognitive Neuroscience Society annual meeting (virtual).

Cheng, Y., & **Chrastil, E.R.** (2021). “The emergence of head direction signals in human navigation”, Poster, SfN Virtual Connectome.

Woodry, R., & **Chrastil, E.R.** (2021). “Functional connectivity profiles predict trial-by-trial success in a navigation task”, Poster, SfN Virtual Connectome.

Hatamian, N., Woodry, R., Tranquada-Torres, B., Ye, A., & **Chrastil, E.R.** (2021). “The relationship between navigation abilities and mental disorders”, Poster, SfN Virtual Connectome.

Chrastil, E.R. (2021). “Age-related changes in navigation are evident by midlife and differ by sex.” Data Blitz Talk, Park City Winter Conference (virtual).

Hegarty, M., He., C., Boone, A.P., & **Chrastil, E.R.** (2020). “Individual differences in wayfinding strategies in real and virtual environments,” Talk, Psychonomic Society annual meeting.

Cheng, Y., & **Chrastil, E. R.** (2020). “The emergence of head direction signals in human navigation,” Poster, Psychonomic Society annual meeting.

Cheng, Y., Ling, S., Stern, C.E., Huang, A., & **Chrastil, E.R.** (2020). “Travel direction as a fundamental component of human navigation,” Talk, NeuroMatch Conference.

Yu, S., Boone, A.P., He, C., Davis, R.C., Hegarty, M., **Chrastil, E.R.,** & Jacobs, E.G. (2020). “Sex differences and age-related changes in spatial navigation,” Data Blitz Talk, Interdisciplinary Navigation Symposium (iNAV).

Cheng, Y., Ling, S., Stern, C.E., Huang, A., & **Chrastil, E.R.** (2020). “Travel direction as a fundamental component of human navigation,” Data Blitz Talk, Interdisciplinary Navigation Symposium (iNAV).

Chrastil, E.R., Montello, D.R., & Davis, R.C. (2019). “Symmetry of pedestrian route choice on a college campus,” Talk, Psychonomic Society annual meeting.

Cheng, Y., Ling, S., Stern, C.E., Huang, A., & **Chrastil, E.R.** (2019). “Travel direction as a fundamental component of human navigation,” Poster, Psychonomic Society annual meeting.

Gunalp, P. **Chrastil, E.R.**, & Hegarty, M. (2019). “Directionality eclipses agency: How both an arrow and human figure improve spatial perspective taking”, Poster, Psychonomic Society annual meeting.

Kasowski, J., & **Chrastil, E.R.** (2019). Assessment of individual differences in navigation by diffusion MRI connectometry. Poster, Society for Neuroscience annual meeting.

Chrastil, E.R. (2019) “Central coordination and integration of diverse information to form a single map”, Talk and position paper, Collective Spatial Navigation Workshop.

Cheng, Y., & **Chrastil, E.R.** (2019). “From individual cognitive maps to a collective cognitive map: Prescriptive guidelines”, Talk and position paper, Collective Spatial Navigation Workshop.

Cheng, Y., Hegarty, M., & **Chrastil, E.R.** (2018). “Embodied experience of the ‘wrong’ hand, not world knowledge, supports the mental rotation of hands”, Poster, Psychonomic Society annual meeting.

Gunalp, P. **Chrastil, E.R.**, & Hegarty, M. (2018). “Perspective taking is affected by perspective shift and pointing quadrant”, Poster, Psychonomic Society annual meeting.

Chrastil, E.R., Goncalves, M., Moore, K., Stern, C.E., & Nyhus, E. (2018). “Theta oscillations during active and passive decision making for human spatial navigation”, Talk, Society for Neuroscience annual meeting.

Cheng, Y., Hegarty, M., & **Chrastil, E.R.** (2018). “Performance discrepancy between left-handers and right-handers reveals multisensory integration in the mental rotation of hands”, Poster, Spatial Cognition.

Cheng, Y., Ling, S., Stern, C.E., Huang, A. & **Chrastil, E.R.** (2018). “Travel direction as a fundamental component of human navigation”, Poster, Interdisciplinary Navigation Symposium (iNAV).

Ericson, J.D., **Chrastil, E.R.**, & Warren, W.H. (2018). “Evaluating a space syntax measure at high resolution”, Talk, Environmental Design Research Association annual meeting.

Chrastil, E.R. (2018). “Functional heterogeneity in human retrosplenial cortex”, Symposium talk, The UC Irvine International Conference on Learning and Memory.

Chrastil, E.R., Goncalves, M., Moore, K., Stern, C.E., & Nyhus, E. (2018). “Theta oscillations during active and passive decision making for navigation,” Poster, Cognitive Neuroscience Society annual meeting.

Chrastil, E.R., Nicora, G.L., Huang, A., & Shafer, C. (2017). "Is home special? Examining errors during path integration," Talk, Psychonomic Society annual meeting.

Chrastil, E.R., Nicora, G.L., Davis, R., & Smith, J. (2017). "The influence of decision-making on spatial learning and memory: An individual differences approach," Poster, Society for Neuroscience annual meeting.

Chrastil, E.R., & Nicora, G.L. (2017). “Visual, vestibular, and proprioceptive contributions to path integration in a novel homing task,” Poster, Vision Sciences Society annual meeting.

Chrastil, E.R., Tobyne, S.M., Nauer, R.K., Chang, A.E., & Stern, C.E. (2016). “Unravelling retrosplenial cortex: Converging evidence for functional parcellation from meta-analyses and the Human Connectome Project,” Talk, Society for Neuroscience annual meeting.

Chrastil, E.R. Sherrill, K.R., & Stern, C.E. (2016). “Individual differences in spatial navigation: Behavior and brain structure,” Poster, Psychonomic Society annual meeting.

Chrastil, E.R., Sherrill, K.R., Izen, S., & Stern, C.E. (2016). “Neural mechanisms of human path integration” Talk, Spatial Cognition.

Chrastil, E. R., Hasselmo, M.E., Stern, C.E., & Ling, S. (2016). “Signatures of egocentric location and speed processing in early visual cortex” Poster, Vision Sciences Society annual meeting.

Chrastil, E. R., Tobyne, S.M., Nauer, R.K., Chang, A.E., & Stern, C.E. (2016). “The retrosplenial cortex: What does it do?” Poster, Cognitive Neuroscience Society annual meeting.

Chrastil, E. R., Sherrill, K.R., Whiteman, A.S., Hasselmo, M.E., & Stern, C.E. (2015). “Which way and how far? Tracking translation and rotation information for human path integration,” Poster, Society for Neuroscience annual meeting.

Chrastil, E. R., Sherrill, K.R., Hasselmo, M.E., & Stern, C.E. (2014). “Tracking location during

complex path integration recruits hippocampus and retrosplenial cortex," Poster, Society for Neuroscience annual meeting.

Sherrill, K.R., **Chrastil, E.R.**, Aselcioglu, I., Hasselmo, M.E., & Stern, C.E. (2014). "Structural differences in hippocampal and entorhinal gray matter volume support individual differences in first-person navigational ability," Poster, Society for Neuroscience annual meeting.

Chrastil, E. R., Sherrill, K.R., Hasselmo, M.E., & Stern, C.E. (2014). "Tracking location during complex path integration recruits retrosplenial cortex," Poster, Organization for Human Brain Mapping annual meeting.

Sherrill, K.R., **Chrastil, E.R.**, Erdem, U.M., Brown, T.I., Ross, R.S., Hasselmo, M.E., & Stern, C.E. (2014). "Successful navigation in the absence or presence of an orienting landmark." Poster, Organization for Human Brain Mapping annual meeting.

Chrastil, E.R., Sherrill, K.R., Aselcioglu, I., & Stern, C.E. (2014). "Structural differences in gray matter volume correspond to individual differences in spatial navigation ability." Poster, Cognitive Neuroscience Society annual meeting.

Sherrill, K.R., **Chrastil, E.R.**, Erdem, U.M., Brown, T.I., Ross, R.S., Hasselmo, M.E., & Stern, C.E. (2014). "Successful navigation in the absence or presence of an orienting landmark." Poster, Cognitive Neuroscience Society annual meeting.

Chrastil, E.R., Brown, T.I., Aselcioglu, I., Hasselmo, M.E., & Stern, C.E. (2013). "Brain mechanisms supporting heading direction in humans." Poster, Society for Neuroscience Annual Meeting.

Chrastil, E.R., & Warren, W.H. (2012). "Contribution of attention to spatial learning for navigation" Poster, Psychonomic Society annual meeting.

Chrastil, E.R., & Warren, W.H. (2012). "Contributions of attention and decision-making to spatial learning" Poster, Vision Sciences Society annual meeting.

Chrastil, E.R., & Warren, W.H. (2011). "What's the difference between active and passive spatial learning?" Poster, Psychonomic Society annual meeting.

Chrastil, E.R., & Warren, W.H. (2011). "Spatial navigation: Why is active exploration better than passive exploration?" Poster, Vision Sciences Society annual meeting.

Chrastil, E.R., & Warren, W.H. (2010). "Estimating encoding and execution errors in path integration." Poster, Psychonomic Society annual meeting.

Chrastil, E.R., & Warren, W.H. (2010). "Active and passive components of spatial learning." Poster, Spatial Cognition.

Chrastil, E.R., & Warren, W.H. (2010). "Learning a new city: Active and passive components of spatial learning." Poster, Vision Sciences Society annual meeting.

Chrastil, E.R., & Warren, W.H. (2009). "Navigation on parallel and perpendicular paths: Affine structure or response error?" Poster, Psychonomic Society annual meeting.

Chrastil, E.R., & Warren, W.H. (2009). "Testing models of path integration in a multi-segment homing task." Poster, Vision Sciences Society annual meeting.

Chrastil, E.R., & Warren, W.H. (2008). "Tests of alternative path integration models using a triangle completion task." Poster, Psychonomic Society annual meeting.

Chrastil, E.R., & Warren, W.H. (2008). "Testing models of path integration in a triangle completion task." Poster, Vision Sciences Society annual meeting.

Chrastil, E.R., & Warren, W.H. (2007). "Can people determine parallel and perpendicular paths in active navigation?" Poster, Psychonomic Society annual meeting.

Honors and Awards

Psychonomic Society Early Career Award	2023
Hellman Fellow	2018
NSF Graduate Research Fellowship, Honorable Mention	2008
Golden Key Honor Society	2000
Washington University Freshman History Award	1999
National Merit Scholar	1998-2002

Teaching Experience

Instructor of Record, University of California, Irvine

NBB208, Systems Neuroscience	Fall 2019
N164, Functional Neuroanatomy	Spring 2021
	Spring 2022
	Winter 2023
H195, Honors Seminar	Spring 2023
Certified in Active Teaching	Winter 2023

Instructor of Record, University of California, Santa Barbara

GEOG108, Urban Geography	Winter 2018
	Fall 2018
*secured $997.45 mini-grant for improving laboratory exercises and materials for GEOG108 (2018)	
GEOG288, Seminar in Spatial Cognition and Spatial Neuroscience	Spring 2017
	Winter 2018
GEOG288, Seminar in Navigation, Sex Differences, and Aging	Winter 2019
GEOG5, People, Place, and Environment	Winter 2017
	Spring 2018
	Winter 2019

Teaching Assistant, Brown University

COGS0110 Perception, Illusion, and the Visual Arts	Spring 2010
COGS0440 Perception and Mind	Spring 2009
COGS0420 Human Cognition	Spring 2008
COGS0500 Making Decisions	Fall 2007

Sheridan Center for Teaching and Learning, Brown University

Teaching Certificate I: The Sheridan Teaching Seminar	November 2008
Teaching Certificate III: Professional Development	May 2010
Teaching Certificate IV: Teaching Consultant	May 2011

Mentoring Experience

University of California, Irvine

Postdoctoral Researchers

Michael Starrett, PhD	2021-present
T-32 Training Grant Fellowship	2022
Roger W. Russell Award, UCI CNLM	2022
F-32 NRSA Fellowship	2023-present
Vaisakh Puthusseryppady, PhD	2021-present

Graduate Students (Committee Chair)

You (Lily) Cheng; Cognitive Sciences, PhD	2019-2022
Roger W. Russell Award, UCI CNLM	2021
Daniela Cossio; Neurobiology & Behavior	2021-present
Faculty Mentor Program Fellowship, UCI GradDiv	2022-2023
Jared M. Roberts Award, UCI CNLM	2023
T-32 Training Grant Fellowship	2023-2024
Erica Ward; Math, Computational & Systems Biology	2021-present
John Haycock Award, UCI CNLM	2022
T-32 Training Grant Fellowship	2022-2024
Theo Kapogianis; Neurobiology & Behavior	2021-present
Fateme (Marjan) Rashidi; Cognitive Sciences	2021-present
Tiffany Raber; Cognitive Sciences	2023-present

Graduate Committees

Elena Dominguez; Neurobiology & Behavior	2019-2021
Shuying Yu (UCSB; Psychological & Brain Sciences)	2020-2023
Carol He (UCSB; Psychological & Brain Sciences)	2021-2023
Kexin Chen; Cognitive Sciences	2021-2022
Mansi Saraf; Neurobiology & Behavior	2021-present
Batool Rizvi; Neurobiology & Behavior	2022-present
Bianca Leonard; MSTP (Neurobiology & Behavior)	2022-present
Wing (Winny) Ning; Neurobiology & Behavior	2022-present
Hin Wai (Tim) Lui; Cognitive Sciences	2023-present
Rotation Students, Interdepartmental Neuroscience Program	2020-present
Emily Castro, Vini Duarte, Kate Lawson, Daniela Cossio, Theo Kapogianis, Sarvia Aquino	
Undergraduate/High School Student Researchers (~25/year)	2019-present
Summer Institute in Neuroscience, Faculty Mentor	2021-present

University of California, Santa Barbara

Undergraduate Student Researchers (~8 students/year)	2017-2019
Graduate Students	
You (Lily) Cheng; Geography	2017-2019
Justin Kasowski (Smith); Dynamical Neuroscience	2018-2019

Boston University

Undergraduate Directed Study, 1 student	2013-2014
Undergraduate Summer Research Fellows, 2 students	2014
Undergraduate Research Opportunities Program, 2 students	Fall 2014
Masters Student Research Project, 1 student	2014-2015

Professional Memberships

Cognitive Neuroscience Society
Organization for Human Brain Mapping
Memory Disorders Research Society
Fellow of the Psychonomic Society
Society for Neuroscience
Spatial Intelligence and Learning Center (SILC) Spatial Network
Vision Sciences Society

Journal Editing and Review

Consulting Editor:

Psychonomic Bulletin & Review 2020-present

Reviewing Editor:

Brain Imaging & Stimulation 2020-2021
(specialty section of Frontiers in Human Neuroscience)

Guest Associate Editor:

Frontiers in Human Neuroscience (with Thackery Brown) special topic “Spatial navigation: Memory mechanisms and executive function interactions.” Edited 7 manuscripts and wrote editorial, 2017-2018

Ad Hoc Journal Referee:

ACM Transactions on Applied Perception • Acta Psychologica • Advances in Cognitive

Psychology • Advances in Human-Computer Interaction • Alzheimer's Disease and Dementia • Applied Cognitive Psychology • Architectural Science • Attention, Perception, & Psychophysics • Behavioral Brain Research • Behavioral Neuroscience • BMC Neurology • Brain & Behavior • Brain Imaging & Stimulation • British Journal of Developmental Psychology • British Journal of Psychology • Cognition • Cognitive Processing • Cognitive Psychology • Cognitive Research: Principles & Implications • Cortex • Current Biology • Current Opinion in Behavioral Sciences • Developmental Psychology • Environment & Behavior • Experimental Brain Research • Frontiers in Aging Neuroscience • Frontiers in Behavioral Neuroscience • Frontiers in Human Neuroscience • Frontiers in Neurology • Frontiers in Virtual Reality • Hippocampus • Human Brain Mapping • Journal of Alzheimer's Disease • Journal of Applied Research in Memory & Cognition • Journal of Cognitive Enhancement • Journal of Cognitive Neuroscience • Journal of Cognitive Psychology • Journal of Experimental Psychology: General • Journal of Experimental Psychology: Human Perception and Performance • Journal of Experimental Psychology: Learning, Memory, & Cognition • Journal of Motor Behavior • Journal of Neuroscience • Journal of Vision • Learning & Memory • Memory • Memory & Cognition • Multisensory Research • Nature Communications • Nature Human Behavior • Nature Neuroscience • Nature Reviews Neuroscience • Neuron • Neuropsychology Review • PLOS Computational Biology • PLOS ONE • Proceedings of the National Academy of Science • Psychological Research • Psychonomic Bulletin & Review • Quarterly Journal of Experimental Psychology • Research in Developmental Disabilities • SAGE Open • Scientific Reports • Spatial Cognition & Computation • TopiCS in Cognitive Science • WIREs Cognitive Science

Ad Hoc Grant Proposal Referee:

- Freiburg Institute for Advanced Studies, 2018
- National Science Foundation (Perception, Action, & Cognition Program), 2019
- National Science Foundation (Methodology, Measurement, & Statistics Program), 2019
- National Science Foundation (Computational Neuroscience Program), 2020
- National Science Foundation (Perception, Action, & Cognition Program), 2020
- National Institutes of Health (Neurobiology of Learning & Memory review panel), 2020
- National Science Foundation (Collaborative Research in Computational Neuroscience review panel), 2021
- University of Utah Center on Aging pilot grants, 2021
- National Science Foundation (Perception, Action, & Cognition Program), 2021
- National Science Foundation, Graduate Research Fellowship Program panel, 2022
- National Science Foundation (Education Core Research panel), 2023
- German Research Council, ad hoc reviewer, 2023
- National Science Foundation (Perception and Cognition Program), 2023
- French National Research Agency, ad hoc reviewer, 2023

Academic Service

University of California, Irvine

Ad-hoc Merit Committees, Neurobiology & Behavior	2019-present
UCI End Racism Initiative, Working Group 2 (Recruiting Black Students)	2020-2022
Graduate Student Wellbeing Committee, Neurobiology & Behavior	2021-present
Chair, Departmental Retreat Committee, Neurobiology & Behavior	2021
Chair, Junior Faculty Wellness and Support Committee, CNLM	2021-present
Biological Sciences Executive Committee	2022-present
Chair	2023-present
UCI Divisional Assembly	2022-present
Alternate, Universitywide Assembly	2023-present

Biological Sciences Graduate Awards Committee	2023-present
DECADE Mentor, Neurobiology & Behavior and Interdepartmental Neuroscience Program	2023-present

University of California, Santa Barbara

Chair's Advisory Committee, Department of Geography	2016-2017 2018-2019
Events Committee, Department of Geography	2016-2019
Curriculum Committee, Department of Geography	2016-2018
Income and Recharge Committee faculty representative, UCSB	2017-2019
Urban Inequalities and Health Disparities search committee, Geography	2018-2019
Judge, UCSB Grad Slam, preliminary round	2019

Brown University

Graduate Student Representative	2007-2008
Graduate Core Course Committee	Fall 2007
Colloquium Coordinator	2009-2010