

June 2022

## Employment

- 2022 - Present      **Associate Professor**, Department of Psychological and Brain Sciences, Quantitative Biomedical Sciences, Cognitive Science Affiliate, Quantitative Social Science Affiliate, Dartmouth College
- 2015 - 2021      **Assistant Professor**, Department of Psychological and Brain Sciences, Dartmouth College
- 2012-2015      **Postdoctoral Fellow**, University of Colorado Boulder (with Tor Wager, PhD)
- 2011 – 2012      **Predoctoral Clinical Psychology Intern**, University of California Los Angeles Semel Institute for Neuroscience (Health Behavior Track)

## Education & Training

- 2006 – 2012      **University of Arizona**, Tucson, AZ  
PhD in Clinical Psychology (with Alan Sanfey, PhD & John Allen, PhD)
- 2004 – 2006      **New School for Social Research**, New York, NY  
MA in Clinical Psychology (with David Silbersweig, MD, Marcel Kinsbourne, DM)
- 1998 – 2002      **Reed College**, Portland, OR  
BA in Psychology (thesis with Jennifer Henderlong-Corpus, PhD)

## Funding

- 2022-Present      **Co-PI**, R01DA053311 National Institute on Drug Abuse (\$1,078,025)  
Neural mechanisms of social connection
- 2021-Present      **Co-I**, R21MH124674 National Institute of Mental Health, (PI: Krzysztof Bujarski; subaward=\$101,674)  
Modulation of emotion perception and memory via basolateral amygdala stimulation in humans
- 2021-Present      **Co-I**, R01HL157422 National Institute of Mental Health, (PI: Keely Muscatell; subaward=\$516,825)  
Neural and Molecular Mechanisms Underlying Stress-Induced Inflammatory Responses
- 2020-2021      **PI**, Remote Experiential Learning Mini-Grant (\$3,210)  
Dartmouth Center for the Advancement of Learning  
Experiential learning in an online neuroimaging methods laboratory course
- 2019-Present      **PI**, CAREER 1848370 National Science Foundation (\$886,457)  
Neural and computational basis of guilt in decision-making
- 2018-Present      **PI**, R01MH116026 National Institute of Mental Health (\$3,540,813).

	Dynamic brain representations underlying emotional experience
2018-2020	<b>PI</b> , R56 MH080716 National Institute of Mental Health (\$810,000). Prefrontal-Amygdala interaction in social-learning
2017 – 2019	<b>PI</b> , The Nelson A. Rockefeller Center at Dartmouth College, Faculty Research Grant (\$14,998.28). Improving healthcare decisions: Managing emotions in social decision-making with exogenous constraints
2017 – 2018	<b>Co-PI</b> , Chiang Ching-kuo Foundation for International Scholarly Exchange (\$35,000). Towards a computational understanding of social status and mianzi in Chinese and American Cultures
2016 – 2017	<b>PI</b> , Neukom Institute for Computational Science, CompX Grant (\$25,000) Crowd sourced development and validation of Neuro-computational models of affect
2014 – 2016	<b>Co-I</b> , National Institute of Health, Big Data to Knowledge (PI: Tor Wager; \$104,572) fMRI-based Biomarkers for Multiple Components of Pain
2012 – 2015	<b>Co-I</b> , National Institute of Health (PI: Tal Yarkoni) Large-scale automated synthesis of functional neuroimaging data
2009 – 2012	<b>PI</b> , National Institute of Mental Health, National Research and Service Award (\$91,746). Mechanisms Underlying Social Cooperative Behavior

### Awards & Fellowships

2019	<b>Fellow</b> Association for Psychological Science
2019	<b>Janet Taylor Spence Award for Transformative Early Career Contributions</b> , Association for Psychological Science
2018	<b>Junior Faculty Fellowship</b> , Dartmouth College
Summer 2010	<b>Cognitive Science Center Neuroeconomics Summer School</b> , University of Amsterdam
2009	<b>Graduate and Professional Student Council Student Showcase - 1<sup>st</sup> place</b> , University of Arizona
2009	<b>Technology Research Initiative Fund Graduate Student Imaging Fellowship</b> , University of Arizona
Summer 2008	<b>Neuroimaging Training Program Fellowship</b> , University of California Los Angeles
Summer 2007	<b>Summer Institute in Cognitive Neuroscience Fellowship</b> , University of California Santa Barbara
2006 – 2007	<b>Graduate Minority Fellowship</b> , University of Arizona
2006 – 2007	<b>Deans Fellowship</b> , New School for Social Research (Declined)
2004 – 2006	<b>University Scholars Award</b> , New School for Social Research

Publications (h-index=32, citations=5,655)

*Underlined authors are current or former trainees (postdoctoral, graduate, undergraduate, and research assistants).  $\Omega$  indicates comments, reviews, or chapters that were not peer reviewed.*

- 1) Templeton, E.M., **Chang, L.J.**, Reynolds, E.A., LeBeamont, M.D., & Wheatley, T.P. (2022). Clicking in conversation: Short gaps between turns signal connection. *Proceedings of the National Academy of Science*, 119(4).
- 2) Han, X.C., Ashar, Y.K., Kragel, P., Petre, B., Schelkun, V., Atlas, L., **Chang, L.J.**, Jepma, M., Koban L., Losin, E.A., Roy, M., Woo, C.W., & Wager, T.D. (2021). Effect size and test-retest reliability of the fMRI-based Neurologic Pain Signature. *Neuroimage*.
- 3) Cheong, J.H., Molani, Z., Sadhukha, S., & **Chang, L.J.** (In Press). Synchronized emotions in shared experiences increase social connection. *Nature Communications Biology*.
- 4) **Chang, L.J.**, Jolly, E., Cheong, J.H., Chen, P.H.A, Rapuano, K., & Manning, J.R. (2021). Endogenous variation in ventromedial prefrontal cortex state dynamics reflects affective experience in naturalistic viewing. *Science Advances*, 7 (17), 1-17.
- 5) Jolly, E. & **Chang, L.J.** (2021). Gossip drives vicarious learning and facilitates robust social connections. *Current Biology* 31, 1-11.
- 6) Gonzalez, B. & **Chang, L.J.** (2021). Computational models of mentalizing. In *The Neural Basis of Mentalizing*. Gilead, M & Ochsner, K. (Eds). Springer.
- 7) Mollick, J.A., **Chang, L.J.**, Krishnan, A., Hazy, T.E., Krueger, K.A., Frank, G.K.W., Wager, T.D., O'Reilly, R.C. (2021). The neural correlates of cued reward omission. *Frontiers in Human Neuroscience*.
- 8) Jolly, E., & **Chang, L.J.** (2021) Spatial feature selection in multivariate pattern analysis. *Social Cognitive Affective Neuroscience*.
- 9) Clark, M.D., & **Chang, L.J.** (2021). Surprise signals changing affective experiences in naturalistic sports spectating. *Neuron*.  $\Omega$
- 10) van Baar, J., Klaassen, F., Ricci, R., **Chang, L.J.**, & Sanfey, A.G. (2020). Stable distribution of reciprocity motives in a population. *Scientific Reports*,10, 18164.
- 11) Jolly, E.\*, Sadhukha, S., & **Chang, L.J.** (2020). Response to Lynch et al: On measuring head motion and effects of head molds during fMRI. *Neuroimage*.  $\Omega$
- 12) van der Meer, J., Breakspear, M., **Chang, L.J.**, Sonkusare, S., & Cocchi, L. (2020). Movie viewing elicits rich and reliable brain state dynamics. *Nature Communications*.
- 13) Jolly, E.\*, Sadhukha, S.\*, & **Chang, L.J.** (2020). Headcases do not reduce head motion during natural viewing and speech. *Neuroimage*. \*denotes equal contributions.
- 14) Gonzalez, B., & **Chang, L.J.** (2020). Arbitrating computational models of observational learning. *Neuron* 106, 558-560.  $\Omega$
- 15) Chen, P.H., Jolly, E., Cheong, J.H., & **Chang, L.J.** (2020). Inter-subject representational similarity analysis reveals individual variation in affective experience when viewing erotic movies. *Neuroimage*, 216.
- 16) Yu, H., Koban, L., **Chang, L.J.**, Wagner, U., Krishnan, A., Vuilleumier, P., Zhou, X., & Wager, T.D. (2020). The neural signature of cognitive antecedents and behavioral responses of interpersonal guilt. *Cerebral Cortex*, 30 (6) 3558-3572.

- 17) Chen, P.H.A., Cheong, J.H., Jolly, E., Elhence, H., Wager, T.D., & **Chang, L.J.** (2019). Socially transmitted placebo effects. *Nature Human Behavior*, 1-11.
- 18) Cheong, J.H., Brooks, S., & **Chang, L.J.** (2019). FaceSync: Open source framework for recording facial expressions. *F1000 Research*, 8.
- 19) Gong, X, Brazil, I.A., **Chang, L.J.**, & Sanfey, A.G. (2019). Psychopathic traits are related to diminished guilt aversion and reduced trustworthiness during social decision-making. *Scientific Reports*.
- 20) Van Baar, J., **Chang, L.J.**, & Sanfey, A.G. (2019). Neural and computational substrates of moral phenotypes in social decision-making. *Nature Communications*, 10 (1) 1483.
- 21) Fareri, D.S., **Chang, L.J.**, & Delgado, M.R. (2019). Mechanisms of social learning. In *The Cognitive Neurosciences* 6<sup>th</sup> edition. Gazzaniga, M.S (Ed). MIT Press.
- 22) Jolly, E., & **Chang, L.J.** (2019). The Flatland Fallacy: Moving beyond low dimensional thinking. *Topics in Cognitive Science*, 11(2), 433-454.
- 23) FeldmanHall, O. & **Chang, L.J.** (2018). Social Learning: Emotions aid in optimizing goal-directed social behavior. In *Understanding Goal-Directed Decision-Making: Computations and Circuits*, Bornstein, A & Shenhav, A (Eds). Elsevier.
- 24) **Chang, L.J.** & Jolly, E. (2018). Emotions as computational signals of goal error. In *Nature of Emotion*, Fox, D., Lapate, R., Shackman, A., & Davidson, R.J (Eds). Oxford Press.  $\Omega$
- 25) Taylor, V., Roy, M., **Chang, L.J.**, Gill, L. N., Mueller, C., & Rainville, P. (2018). Reduced Fear-Conditioned Pain Modulation in Experienced Meditators: A Preliminary Study. *Psychosomatic medicine*.
- 26) Vavra, P., & **Chang, L.J.**, & Sanfey, A.G. (2018). Expectations in the Ultimatum Game: Distinct Effects of Mean and Variance of Expected Offers. *Frontiers in Psychology*, 9, 992.
- 27) Cheong, J.H., Jolly, E., Sul, S., & **Chang, L.J.** (2017). Computational models in social neuroscience. In *Computational Models of Brain and Behavior*, Moustafa, A (Ed), Wiley-Blackwell.  $\Omega$
- 28) Sul, S., Guroglu, B., Crone, E.A., & **Chang, L.J.** (2017). Medial prefrontal cortical thinning mediates shifts in other-regarding preferences during adolescence. *Scientific Reports*, 7(8510), 1-10.
- 29) Shermohammed, M., Mehta, P.H., Zhang, J., Brandes, C., **Chang, L.J.**, & Somerville, L.H. (2017). Does psychosocial stress impact cognitive reappraisal? Behavioral and neural evidence. *Journal of Cognitive Neuroscience*.
- 30) Taylor, V., **Chang, L.J.**, Rainville, P., & Roy, M. (2017). Learned Expectations and Uncertainty Facilitate Pain during Classical Conditioning. *Pain*, 158(8), 1528-1537.
- 31) Ashar, J.Y., **Chang, L.J.**, & Wager, T.D. (2017). Brain mechanisms of the placebo effect: An affective appraisal account. *Annual Reviews of Clinical Psychology*.
- 32) Woo, C.W., **Chang, L.J.**, Lindquist, M., & Wager, T.D. (2017). Brain signatures and models in translational imaging. *Nature Neuroscience*, 20 (3), 365-377.

- 33) Eisenbarth, H., **Chang, L.J.**, & Wager, T.D. (2016). Multivariate brain prediction of heart rate and skin conductance responses to social threat. *Journal of Neuroscience*, 36(47):11987-11998.
- 34) De La Vega, A., **Chang, L.J.**, Banich, M.T., Wager, T.D., & Yarkoni, T. (2016). Meta-analytic functional analysis of human medial frontal cortex reveals tripartite organization. *Journal of Neuroscience*.
- 35) Krishan, A., Woo, C.W.\*, **Chang, L.J.\***, Ruzic, L., Jackson, P., Wager, T.D. (2016). Somatic and vicarious pain are represented by dissociable multivariate brain patterns. *eLife*. \*denotes equal contributions.
- 36) Wager, T.D., Atlas, L.Y., Botvinick, M., **Chang, L.J.**, Coghill, R.C., Davis, K.D., Iannetti, G.D., Poldrack, R.A., Shackman, A.J., & Yarkoni, T. Pain in the ACC? Commentary on Lieberman and Eisenberger. (2016). *Proceedings of the National Academy of Science*.  $\Omega$
- 37) Lindquist, M.A., Krishnan, A., Lopez-Sola, M., Jepma, M., Woo, C.W., Roy, M., Atlas, L.Y., **Chang, L.J.**, Losin, L., Eisenbarth, H., Ashar, Y.K., Koban, L., Delk, Z., & Wager, T.D. (2015). Group-regularized individual prediction: Theory and application to pain. *Neuroimage*.
- 38) **Chang, L.J.** & Smith, A. (2015). Social emotions and psychological games. *Current Opinions in Behavioral Sciences*, 5:133-140.
- 39) Yu, H., Shen, B., Yin, Y., Blue, P., & **Chang, L.J.** (2015). Dissociating guilt- and inequity-aversion in cooperation and norm compliance. *Journal of Neuroscience*, 35(24), 8973-8975.  $\Omega$
- 40) Fareri, D.S.\*, **Chang, L.J.\***, Delgado, M.R. (2015). Neural and computational mechanisms underlying interpersonal collaboration. *Journal of Neuroscience*, 35(21), 8170-8180. \*denotes equal contributions.
- 41) **Chang, L.J.**, Gianaros, P., Manuck, S., Krishnan, K., & Wager, T.D. (2015). A sensitive and specific neural signature for picture induced affect. *PLoS Biology*, 13(6), 1-28.
- 42) **Chang, L.J.**, Reddan, M., Ashar, Y.K., Eisenbarth, H., & Wager, T.D. (2015). The challenges of forecasting resilience. *Behavioral Brain Sciences Commentary*, 38, 26-27.
- 43) Sanfey, A.G., Stallen, M., & **Chang, L.J.** (2014). Norms and expectations in social decision-making. *Trends In Cognitive Science*, 18(4), 172-174.  $\Omega$
- 44) **Chang, L.J.** & Koban, L. (2013). Modeling emotion and learning of norms in social interactions. *Journal of Neuroscience*, 33(18), 7615-7617.  $\Omega$
- 45) **Chang, L.J.**, Yarkoni, T., Khaw, M.W., & Sanfey, A.G. (2013). Decoding the role of the human insula in human cognition: Functional parcellation and large-scale reverse inference. *Cerebral Cortex*, 23(3), 739-749.
- 46) **Chang, L.J.**, & Sanfey, A.G. (2013). Great expectations: Neural computations underlying the use of social norms in decision-making. *Social Cognitive Affective Neuroscience*, 8(3), 277-284.
- 47) Brown, A.D., Root, J.C., Romano, T., **Chang, L.J.**, & Hirst, W. (2013). The limits of memory and imagination: Overgeneralized autobiographical Memory and future thinking in combat veterans with posttraumatic stress disorder. *Behavior Therapy and Experimental Psychiatry*, 44(1), 129-134.
- 48) Fareri, D.S., **Chang, L.J.**, Delgado, M.R. (2012). Effects of experienced social information on trust decisions and neural reward circuitry. *Frontiers in Decision Neuroscience*, 6, 1- 17.

- 49) Kahnt, T., **Chang, L.J.**, Park, S.Q., Heinzle, J., Haynes, J.D. (2012). Connectivity based parcellation of the human orbitofrontal cortex. *Journal of Neuroscience*, 32(8), 6240-6250.
- 50) Harle, K.M., **Chang, L.J.**, van't Wout, M., & Sanfey, A.G. (2012). The neural underpinnings of mood-driven biases in social economic decision-making. *Neuroimage*, 61(1), 32-40.
- 51) **Chang, L.J.**, Smith, A., Dufwenberg, M., & Sanfey, A.G. (2011). Triangulating the neural, psychological, and economic bases of guilt aversion. *Neuron*, 70, 560-572.
- 52) Van't Wout, M, **Chang, L.J.**, & Sanfey, AG. (2010). Emotion regulation and social interactive decision-making. *Emotion*, 10(6), 815-821.
- 53) **Chang, L. J.**, Doll, B., Van't Wout, M., Frank, M., Sanfey, A.G. (2010). Seeing is believing: Trustworthiness as a dynamic belief. *Cognitive Psychology*, 61(2), 87-105.
- 54) **Chang, L.J.**, & Sanfey, A.G. (2009). Unforgettable Ultimatums? Expectation violations promote enhanced social memory following economic exchange. *Frontiers in Behavioral Neuroscience*, 3, 1-12.
- 55) **Chang, L.J.** & Sanfey, A.G. (2008). Emotion, decision-making, and the brain. In D. Houser & K. McCabe (Eds.), *Neuroeconomics*. Elsevier, 31-53.
- 56) Sanfey, A.G. & **Chang, L.J.** Multiple systems in decision-making. (2008). In W.T. Tucker, S. Ferson, A. Finkel, T.F. Long, D. Slavin, P. Wright (Eds.), *Strategies for risk communication: Evolution, evidence, experience*. New York: *Annals of the New York Academy of Science*, 1128, 53-62.
- 57) Protopopescu, X., Pan, H., Tuescher, O., Root, J., **Chang, L.**, Altemus, M., Polanecsky, M., McEwen, B., Stern, E., & Silbersweig, D. (2008). Toward a Functional Neuroanatomy of Premenstrual Dysphoric Disorder: Differential Amygdalar, Orbitofrontal and Ventral Striatal Activity. *Journal of Affective Disorders*, 108, 87-94.
- 58) Butler, T., Pan, H., Tuescher, O., Engeliem, A., Goldstein, M., Epstein, J., Weisholtz, D., Protopotescu, X., Root, J. C., Cunningham-Bussell, A.C., **Chang, L.**, Xie, X.H., Chen, Q., Phelps, E.A., Ledoux, J.E., Stern, E., Silbersweig, D.A. (2007). Human fear-related motor neurocircuitry. *Neuroscience*, 150 (1) 1-7.
- 59) Butler, T., Imperato-McGinley, J., Pan, H., Voyer, D., Cunningham-Bussel, A. C., **Chang, L.**, Zhu, Y. S., Cordero, J., Stern, E., Silbersweig, D. (2007). Sex specificity of ventral anterior cingulate cortex suppression during a cognitive task. *Human Brain Mapping*, 28 (11), 1206-12.
- 60) Root, J.C., Robbins, R., **Chang, L.**, & Van Gorp, W.G. (2006). Detection of suboptimal effort on the California Verbal Learning Test, Second Edition: analysis and normative data for forced choice recognition. *Journal of the International Neuropsychological Society*, 12 (5), 688-96.

#### Manuscripts Under Review (n=10)

Templeton, E.M., **Chang, L.J.**, Reynolds, E.A., LeBeamont, M.D., & Wheatley, T.P. (2022). Clicking in conversation: Long gaps between turns are awkward for strangers, but not friends.

Gao, X., Jolly, E., Yu, H., Liu, H., Zhou, X.\*, & **Chang, L.J.\*** *The hidden cost of receiving help: A theory of indebtedness*. \*denotes equal contributions. Manuscript Under Revision at Nature Communications.

Cheong, J.H., Xie, T.K., Byrne, S.K., & **Chang, L.J.** *Py-Feat: Facial expression analysis toolbox*. Manuscript Under Revision at Affective Science.

Jolly, E., Farrens, M., Greenstein, N., Eisenbarth, H., Reddan, M., Andrews, E., Wager, T.D., & Chang, L.J. *Recovering individual emotional states from sparse ratings using collaborative filtering.* Manuscript Under Review at Affective Science.

Chen, P.Y, Fareri, D., Güroğluj, B., Delgado, M.R., & Chang, L.J. *Towards a neurometric-based construct validity of trust.* Manuscript Under Review at Nature Neuroscience.

Xie, T.K., Cheong, J.H., Manning, J.R., Brandt, A.M., Aronson, J., Jobst, B., Bujarski, K., & Chang, L.J. *Minimal functional alignment of ventromedial prefrontal cortex intracranial EEG signals during naturalistic viewing.* Manuscript Under Review at eLife.

Fox, A.S., **Chang, L.J.**, Gorgolewski, K., & Yarkoni, T. *Bridging genetics and psychology using large-scale spatial analysis of neuroimaging and neurogenetic data.* Manuscript Under Revision at Nature Neuroscience

Bujarski, K., Song, Y, Xie, T., Kolankiewicz, S., Aronson, J., **Chang, L.J.**, Jobst, B. *Modulation of affective valence via amygdala stimulation in humans.* Manuscript Under Review at Journal of Cognitive Neuroscience.

Weaverdyck, M.E., Du, M., Li, Y.C., **Chang, L.J.** & Parkinson, C. *Homophily serves as a social prior: The assumption that “birds of a feather flock together” shapes social decisions and relationship beliefs.* Manuscript Under Revision at JEP:General.

Muscattell, K.A., Merritt, C.C., Cohen, J.R., **Chang, L.J.**, & Lindquist, K.A. *The stressed brain: neural underpinnings of social stress processing in humans.* Manuscript Under Review.

## White Papers

**Chang, L.J.** (2017). The science of trust. Commission on Trust, Media, and American Democracy. The Aspen Institute.

## Online Books

**Chang, L.J.**, Huckins, J., Cheong, J.H., Brietzke, S., Lindquist, M.A., & Wager, T.D. (2020, June). DartBrains: An online open access resource for learning functional neuroimaging analysis methods in Python (Version 1.0). Zenodo. <http://doi.org/10.5281/zenodo.3909718> **(35k visits)**

**Chang, L.J.**, Manning, J.R., Baldassano, C., de la Vega, A., Fleetwood, G., Geerligs, L., Haxby, J., Lahnakoski, J., Parkinson, C., Shappell, H., Shim, W.M., Wager, T.D., Yarkoni, T., Yeshurun, Y. & Finn, E. (2020, July). Naturalistic-Data: An online open access resource for learning how to analyze naturalistic neuroimaging data (Version 1.0). Zenodo. <http://doi.org/10.5281/zenodo.3937849> **(8.1k visits)**

## Selected Open-Source Software Packages

**nitools.** A suite of Python tools for conducting multivariate analysis of neuroimaging data <http://nitools.org/> (94,921 Downloads)

**neuro-learn.** Cloud-based predictive modeling of neuroimaging <http://neuro-learn.org>

**neighbors.** A Python toolbox for performing collaborative filtering on emotion datasets

<https://neighbors.cosanlab.com/>

**py-feat.** A Python toolbox for analyzing and visualizing facial expression data

<https://py-feat.org/> (3,907 Downloads)

**facesync.** A Python toolbox for synchronizing videos based on audio features.

<https://github.com/cosanlab/facesync> (24,992 Downloads)

## Chaired Symposia, Workshops, & Summer Schools

2022	<b>Co-Organizer</b> of Naturalistic Data Analysis Challenged presented at Social Affective Neuroscience Society.
2020	<b>Co-Director</b> of 9-day Methods in Neuroscience at Dartmouth Computational Summer School on “Interacting Minds”, Hanover, NH
2020	<b>Co-Organizer</b> of SANS preconference workshop on “Computational Social and Affective Neuroscience” (Cancelled due to Covid-19)
2019	<b>Co-Chair</b> 8 <sup>th</sup> Annual Affective Computing and Intelligent Interaction Meeting Special Session “Neural & Psychological Models of Affect”, Cambridge, UK
2019	<b>Co-Director</b> of 9-day Methods in Neuroscience at Dartmouth Computational Summer School on “Cognitive Maps”, Hanover, NH
2019	<b>Co-Director</b> of 14-day Summer Institute in Cognitive Neuroscience Summer School on “Computational Social Neuroscience: Advances, Challenges, and New Directions”, Santa Barbara, CA
2019	<b>Co-Organizer</b> of SANS preconference workshop on “Computational Social and Affective Neuroscience”
2018	<b>Co-Director</b> of 9-day Methods in Neuroscience at Dartmouth Computational Summer School of “Narratives and Natural Contexts”, Hanover, NH,
2017	<b>Co-Director</b> of 8-day Methods in Neuroscience at Dartmouth Computational Summer School of “Multiscale Network Dynamics”, Hanover, NH
2017	<b>Co-Organizer</b> of Dartmouth BrainHack (4-day department neuroscience hackathon), Hanover, NH
2016	<b>Co-Chair</b> Society for Neuroscience Nanosymposium “Insights into human cognition and emotion using large-scale neuroinformatics” Nanosymposium, San Diego, CA
2016	<b>Co-Chair</b> for “Dartmouth Affective Neuroscience Symposium”, Hanover, NH
2014	<b>Co-Chair</b> for “Computational approaches to social affective neuroscience” at the 7th Annual Social Affective Neuroscience Society Meeting, Denver, CO
2010	<b>Co-Organizer</b> of a 3-day workshop, University of Arizona School, Tucson, AZ, “Introduction to the R statistical language”

## Professional Service

2021	NIH Computational Psychiatry Special Review Panel
2020 – Present	Editorial Board - Current Opinions in Behavioral Science
2020	NSF CAREER Panel, Dartmouth College
2020	NSF Adhoc Reviewer
2020	NIH Computational Psychiatry Special Review Panel
2019 – Present	Affective Computing & Intelligent Interactions Program Committee
2019 - Present	Editorial Board - Affective Science
2019 - Present	Max Planck Center for Language, Music, & Emotion Affiliate



2019	NIH Computational Psychiatry Special Review Panel
2018	NIH MESH Review Panel
2018 - Present	Society for Affective Science Journal Advisory Board
2018 - 2020	Program Committee Social Affective Science Meeting
2018 - Present	Scientific Advisory Board for Mind Trace <a href="https://mind-trace.com/">https://mind-trace.com/</a>
2016	Reviewer Cosyne Meeting
2016 – Present	Review Editor for Emotion
2015- 2016	Organizing Committee Social Affective Neuroscience Meeting
2014 – 2016	Review Editor Frontiers in Emotion Science
Summer 2013	Guest Lecturer in University of Colorado Science Discovery Program for adolescents
2008	Psychology Department Mini-Convention Organizer
2006 – 2008	Psychology Department Graduate Student Representative

## Invited Talks (n=81)

May 2022	<b>Social Affective Neuroscience Society</b> , Virtual
Mar 2022	<b>Computational Properties of Prefrontal Cortex</b> , Oxford, UK
Mar 2022	<b>University of Toronto</b> , Toronto, CA
Dec 2021	<b>Sungkyunkwan University</b> , Seoul, Korea
Nov 2021	<b>University of Zurich</b> , Zurich, Switzerland
Sep 2021	<b>Rutgers University</b> , New Brunswick, NJ
Jun 2021	<b>Social Neuroscience in Ecologically Valid Conditions Conference</b> , Moscow Russia
May 2021	<b>University of Maryland College Park</b> , College Park, MD
Oct 2020	<b>Technology in Psychiatry Summit</b> , Boston, MA
Mar 2020	<b>Transforming the Practice of Mental Health Care</b> , NIMH Panel
Mar 2020	<b>Program in Placebo Studies &amp; Therapeutic Encounters</b> , Harvard Medical School
Jun 2020	<b>Organization for Human Brain Mapping</b> , Montreal, Quebec
Jun 2020	<b>Interdisciplinary Symposium on Decision Neuroscience</b> , Philadelphia, PA (Cancelled)
Mar 2020	<b>University of Southern California</b> , Los Angeles, CA
Feb 2020	<b>Brown University</b> , Providence, RI
Feb 2020	<b>Johns Hopkins University</b> , Baltimore, MD
Jan 2020	<b>Columbia University</b> , New York, NY
Dec 2019	<b>New York University</b> , New York, NY
Dec 2019	<b>Princeton University</b> , Princeton, NJ
Nov 2019	<b>Max Planck Institute for Empirical Aesthetics</b> , Frankfurt, Germany
Sept 2019	<b>Affective Computing and Intelligent Interactions</b> , Cambridge, UK
July 2019	<b>Reinforcement Learning &amp; Decision-Making</b> , Montreal, Quebec
June 2019	<b>Summer Institute in Cognitive Neuroscience</b> , Santa Barbara, CA
May 2019	<b>Association for Psychological Science</b> , Washington DC
Mar 2019	<b>Victoria University</b> , Wellington, NZ
Mar 2019	<b>Brain functional organization and connectivity workshop</b> , Noosa, Australia
Feb 2019	<b>Center for Healthy Minds</b> , Madison, WI
Feb 2019	<b>University of Wisconsin Madison Colloquium</b> , Madison, WI
Nov 2018	<b>Society for Neuroscience Nanosymposium</b> , San Diego, CA
Nov 2018	<b>Society for Neuroscience Minisymposium</b> , San Diego, CA
Sep 2019	<b>Austen Riggs Computational Neuroscience Workshop</b> , The Berkshires, MA
Aug 2018	<b>Dartmouth Hitchcock Medical Center Department of Neurology</b> , Lebanon, NH
May 2018	<b>Association for Psychological Science</b> , San Francisco, CA
Apr 2018	<b>Society for Affective Science</b> , Los Angeles, CA
Mar 2018	<b>Computational Systems Neuroscience Meeting</b> , Breckenridge, CO
Mar 2018	<b>Society for Personality and Social Psychology</b> , Atlanta, GA
Feb 2018	<b>Templeton Roundtable</b> , Hanover, NH

Jan 2018	Science Pub, Lebanon, NH
Oct 2017	Dartmouth Hitchcock Medical Center Department of Psychiatry, Lebanon, NH
Oct 2017	Princeton University, Princeton, NJ
Oct 2017	New York University, NY, NY
Sep 2017	Harvard University, Boston, MA
Aug 2017	Social Neuroeconomics Summer School, Duke University, Durham, NC
July 2017	Beyond the Lab Psychonomics Workshop, Madison, WI
May 2017	Dartmouth 21 <sup>st</sup> Annual Neuroscience Day, Hanover, NH
May 2017	Multimodal Neuroimaging Training Program, Pittsburgh, PA
May 2017	New England Research Decision-Making Group (Brown University)
May 2017	Boston Area Moral Cognition Group, Harvard University, Boston, MA
May 2017	Affectiva, Boston, MA
Apr 2017	Dartmouth Interdisciplinary Network Research Group, Hanover, NH
Apr 2017	Society for Affective Neuroscience, Boston, MA
Mar 2017	Society for Social and Affective Neuroscience, Los Angeles, CA
Jan 2017	Society for Social and Personality Psychology, San Antonio, TX
Nov 2016	Society for Neuroscience Nanosymposium, San Diego, CA
Jun 2016	Dartmouth Affective Neuroscience Symposium
May 2016	Hanover Rotary Club, Hanover, NH
Nov 2015	Yale University, New Haven, CT
Oct 2015	Harvard University, Cambridge, MA
Oct 2015	Society for Neuroscience Nanosymposium, Chicago, IL
Sep 2015	University of New Hampshire, Durham, NH
May 2015	University of College London, London, UK
May 2014	American Psychological Science, SF, CA
Apr 2014	Social Affective Neuroscience Society, Denver,
Jan 2014	University of California Santa Barbara, Santa Barbara, CA
Dec 2013	Princeton University, Princeton, NJ
Nov 2013	University of Colorado, Boulder, CO
Nov 2013	Dartmouth College, Hanover, NH
Oct 2013	Harvard University, Cambridge, MA
Sep 2013	University of Amsterdam, Amsterdam, The Netherlands
Sep 2013	Donders Institute for Brain, Cognition, and Behavior, Nijmegen, The Netherlands
Aug 2013	European Society for Cognitive Psychology, Budapest, Hungary
Apr 2013	University of Denver, Denver, CO
Jan 2013	University of Colorado, Boulder, CO
May 2012	UCLA, Department of Psychiatry, Los Angeles, CA
Apr 2012	Duke University, Durham, NC
Apr 2012	Virginia Tech Carilion Research Institute, Roanoke, VA
Mar 2012	University of Colorado, Boulder, CO
Feb 2012	Stanford University, Palo Alto, CA
Jun 2010	Leiden University, Leiden, Netherlands
Sep 2009	Society for Neuroeconomics, Evanston, IL.
Nov 2006	Clinical Psychology Datablitz, Tucson, AZ.

## Teaching

Principles of fMRI Data Analysis, Dartmouth College  
[http://cosanlab.com/static/syllabi/PSYC60\\_Syllabus.pdf](http://cosanlab.com/static/syllabi/PSYC60_Syllabus.pdf)  
<https://dartbrains.org/>

**Social and Affective Motivations in Decision-Making**, Dartmouth College

[http://cosanlab.com/static/syllabi/PSYC53\\_Syllabus.pdf](http://cosanlab.com/static/syllabi/PSYC53_Syllabus.pdf)

**Experimental Study of Social Behavior**, Dartmouth College

[http://cosanlab.com/static/syllabi/PSYC63\\_Syllabus.pdf](http://cosanlab.com/static/syllabi/PSYC63_Syllabus.pdf)

<https://github.com/lichang/psyc63>

**The Power of Beliefs**, Dartmouth College

[http://cosanlab.com/static/syllabi/PSYC84\\_Syllabus.pdf](http://cosanlab.com/static/syllabi/PSYC84_Syllabus.pdf)

**Research Methods in Psychology**, University of Arizona

**Graduate Statistics**, University of Arizona

## Mentoring & Research Advising

### Postdoctoral Trainees (n=5)

2015-2016 **Sunhae Sul** (Faculty: Pusan National University)

2015-2018 **Seth Frey** (Faculty: University of California Davis)

Neukom Postdoctoral Fellowship

2016-2019 **Pin-hao (Andy) Chen** (Faculty: National Taiwan University)

Young Scholar Fellowship, Ministry of Science & Technology, Taiwan

Chiang Ching-Kuo Foundation for International Scholarly Exchange

Best Poster Award, Social & Affective Neuroscience Society

Best Poster Award, Social Personality Health Network

2019-Present **Eshin Jolly**

2022-Present **Nir Jacoby**

### Primary Doctoral Students (n=10)

2015-2021 **Jin Cheong** (Facebook)

Crowdfunding Support Grant, Magnuson Center for Entrepreneurship, Dartmouth

AI Grant, Artificial Intelligence Grant

Best Talk Award, Society for Affective Science

Best Poster Award, Social & Affective Neuroscience Society

Best Poster Award, Association for Psychological Science

Guarini Graduate Community Award

Smith Promise Award for Lifetime achievement in Psychological Brain Sciences

2015-2019 **Eshin Jolly** (Postdoc: Dartmouth College)

NSF Graduate Research Fellowship

Best Poster Award, Social & Affective Neuroscience Society

Best Community Hack, Hack Dartmouth

Thayer Consulting Competition, 1<sup>st</sup> place, Dartmouth Thayer

2017-2019 **Daisy Burr** (Transferred to Duke University)

Best Poster Award, Society for Affective Science

2017-2018 **Kristina Rapuano** (Postdoc: Yale University)

NSF Graduate Research Fellowship

Smith Promise Award for Lifetime achievement in Psychological Brain Sciences

2016-Present **Emma Templeton** (co-advised with Thalia Wheatley)

Best Poster Award, Social & Affective Neuroscience Society

2017-Present **Bryan Gonzalez**

2018-2021 **Marissa Clark** (Data scientist at HomeChef)

T32 Predoctoral Fellowship, NIDA

- 2019-Present **Tiankang Xie** (Quantitative Biomedical Science Program)  
Big data in life sciences fellowship from Burroughs Wellcome Fund
- 2021-Present **Wasita Mahaphanit**
- 2021-Present **Paxton Fitzpatrick** (co-advised with Jeremy Manning)

Visiting Students (n=3)

- Fall 2013 **Hongbo Yu** (Peking University; Now Faculty at UC Santa Barbara)
- Spring 2017 **Jeroen van Baar** (Donders Institute; Now postdoc at Brown University)
- Fall 2017 **Xiaoxue Gao** (Peking University; Now Faculty at East China University)

Full Time Research Assistants (n=3)

- 2017-Present **Amanda Brandt**
- 2018-2019 **Sushmita Sadhukha** (now in grad school at Dartmouth)
- 2016-2017 **Antonia Hoidal** (now in med school)

Dissertation Committee (n=9)

- 2021 – Pres **Soo Jung Na**, Icahn School of Medicine at Mount Sinai (Advisor: Xiaosi Gu)
- 2021 – Pres **Jeff Brooks**, NYU (Advisor: Jon Freeman)
- 2019 – Pres **Dae Houlihan**, MIT (Advisor: Rebecca Saxe)
- 2018 – Pres **Yu Han**, University of Vermont (Advisor: Patricia Prelock)
- 2016 – 2019 **Feilong Ma**, Dartmouth College (Advisor: James Haxby)
- 2016 – 2018 **Beau Sievers**, Dartmouth College (Advisor: Thalia Wheatley)
- 2016 – 2017 **Rachel Pizzie**, Dartmouth College (Advisor: David Kraemer)
- 2016 – 2017 **Sam Nastase**, Dartmouth College (Advisor: James Haxby)
- 2015 – 2017 **Briana Robustelli**, University of Colorado Boulder (Advisor: Mark Whisman)

Specialist Committee (n=8)

- 2020 **Chris Welker** (Advisor: Thalia Wheatley)
- 2020 **Caroline Lee** (Advisor: Jeremy Manning)
- 2019 **Kirsten Ziman** (Advisor: Jeremy Manning)
- 2019 **Mira Nenchev** (Advisor: Thalia Wheatley)
- 2018 **Sophie Wohltjen** (Advisor: Thalia Wheatley)
- 2018 **Lucy Owen** (Advisor: Jeremy Manning)
- 2017 **Feilong Ma** (Advisor: James Haxby)
- 2017 **Vassiki Chauhan** (Advisor: Ida Gobbin)

Undergraduate Thesis & Independent Research Project (n=31)

- 2022 **Maxwell Ranger** (Neuroscience Thesis)
- 2022 **Helen Horan** (Neuroscience Thesis)
- 2021 **Ashley Post** (Independent Research Project)
- 2021 **Anthony Milne** (QSS Independent Research Project)
- 2021 **Matt Kenny** (Neuroscience & Computer Science Independent Research Project)
- 2021 **Maryam Iqbal** (Neuroscience Thesis; Presidential Scholar; Leave Term Grant)
- 2021 **Liza Begunova** (Neuroscience Thesis) – won Robert N. Leaton Prize for Best Neuroscience Thesis
- 2021 **Emily Chen** (Neuroscience Thesis; Junior Research Scholar)
- 2021 **Kenny Ngyuen** (Neuroscience Independent Research Project)
- 2021 **Xiao Li** (Neuroscience Independent Research Project)
- 2020 **Paige Whittemore** (Psychology Thesis) – won Benjamin G. Benner 1969 Award for Excellence in Psychology
- 2020 **Hailey Scherer** (Cognitive Science Thesis; Honors Thesis Grant)

- 2020 **Sophie Byrne** (Psychology Thesis; Leave Term Grant) – won Lt. William Brewster Nickerson 1964 Psychology and Brain Sciences Prize
- 2020 **Max Farrrens** (Neuroscience Thesis) – won Robert N Leaton Prize for Best Neuroscience Thesis
- 2020 **Julia Potter** (Psychology Thesis)
- 2020 **Jessica Kobsa** (Senior Fellowship Examining Committee)
- 2019 **Madeleine Waters** (Psychology Thesis w/ Sarah Lord)
- 2019 **Tucker Brown** (QSS Thesis; Honors Thesis Grant)
- 2019 **Karina Lopez** (Neuroscience Independent Research Project)
- 2019 **Nathan Greenstein** (Cognitive Science Independent Research Project; Presidential Scholar)
- 2019 **Samantha Milne** (Cognitive Science Independent Research Project; Junior Research Scholar)
- 2019 **Caitlyn Lee** (Psychology/Computer Science w/ Thalia Wheatley)
- 2019 **Paxton Fitzpatrick** (Psychology Thesis w/ Jeremy Manning) – won Lt. William Brewster Nickerson 1964 Psychology and Brain Sciences Prize
- 2018 **Arati Gangadharan** (Neuroscience Thesis; Presidential Scholar)
- 2018 **Sushmita Sadhukha** (Neuroscience Independent Research Project; Presidential Scholar; Leave Term Grant; Honors Thesis Grant)
- 2018 **Zohra Aslami** (Neuroscience Thesis w/ Wilder Doucette; Leave Term Grant)
- 2018 **Elizabeth Reynolds** (Psychology Thesis w/ Thalia Wheatley)
- 2017 **Dawit Workie** (QSS Thesis; Honors Thesis Grant)
- 2017 **Hirsh Elhence** (Neuroscience Independent Research Project; Presidential Scholar; Leave term Grant)
- 2017 **Helen Schlactenhaufen** (Psychology Independent Research Project)
- 2016 **Dan Whitcomb** (Computer Science Independent Research Project)

Dartmouth Undergraduate Research Assistants (n=30)

**Jonathan Lim** (Junior Research Scholar), **Ashley Post** (Junior Research Scholar), **Helen Horan** (Junior Research Scholar), **Kaitlyn Kelley** (Presidential Scholar), **Jessica Hernandez** (Sophomore Research Scholar), **Emma Gustafson** (Sophomore Research Scholar), **Patricia Yeonas** (Presidential Scholar), **Elliott Tang**, **Mara Stewart**, **Stanley Rozentsvit**, **Zainab Molani** (Junior Research Scholar), **Darien Jones**, **Ziyi Feng**, **Antonia Hoidal**, **Sam Greydanus** (Presidential Scholar), **Taylor Morrell**, **Andrew Boghossian**, **Aimee Sung**, **Kiera Carey** (Junior Research Scholar), **Breiana Campbell**, **Meredith Geaghan-Breiner**, **Emma Langfitt**, **Halla Hafermann**, **Itish Goel**, **Jonathan Lim**, **Lex Kang**, **Nathan Skinner**, **Sandra Reiss**, **Robert Wright**, **Akiah Watts**

Non-Dartmouth Research Assistants, Summer Research Interns, Winter Research Interns (n=7)

**Sawyer Brooks** (Oberlin College), **Hakeem Brooks** (Xavier University), **Jenna Perry** (University of North Carolina), **Eric Andrews** (University of Arizona), **Delenn Solis** (Reed College), **Samantha Westelman** (Oberlin College), **Connor Bentivoglio** (Middlebury)

Ad-hoc Reviewing (Papers, Grants, Proposals)

Behavioral Sciences, Brain and Cognition, Brain Research, Cerebral Cortex, Cognitive Affective Behavioral Neuroscience, Cognitive Computation, DFG – German Research Federation, eLife, Emotion, Rotterdam School of Management, Erasmus University, Evolution and Human Behavior, Frontiers in Neuroscience, Journal of Cognitive Neuroscience, Journal of Neuroscience, Journal of Economic Psychology, Human Brain Mapping, Nature Communications, Nature Human Behavior, Nature Neuroscience, Neuroimage, Neuron, NSF – National Science Foundation, Perspectives in Psychological Science, PLoS One, PLoS Computational Biology, Proceedings for the National Academy of Science, Psychological Science, Science Advances, Psychological Review, Science, Scientific Reports, Social Cognitive Affective Neuroscience, Trends in Cognitive Science, University of Trento, Vermont Genetic Network

Software/Programming Skills (<http://github.com/ljchang>)

Scientific Computing (Python, Matlab, Bash), Statistics (R, Stan, SAS), Brain Imaging (Nipy, FSL, SPM), Web Development (Flask, Meteor)

## Professional Memberships

Society for Neuroscience, Society for Affective Neuroscience, Society for Social Neuroscience, Society for Social Affective Neuroscience, Association for the Advancement of Affective Computing, Society for Social and Personality Psychology, Society for Neuroeconomics, Organization for Human Brain Mapping, Cognitive Neuroscience Society, American Psychological Society

## Media Coverage, Awards, and Scientific Commentary

***Clicking in Conversation*** – Templeton, Chang, Reynolds, LeBeamont, & Wheatley (2022) ([Altmetric=359](#))  
Press

[Washington Post](#), [Yahoo](#), [ScienMag](#)

***Gossip*** – Jolly & Chang, 2021 ([Altmetric=274](#))

Commentary

[Gossip: More than just trash talk](#) – Richard Huskey

Press

[New York Times](#), [Vermont Public Radio](#), [National Academy of Science](#), The Tonight Show Jimmy Fallon, Late Night with Seth Meyers, [The Times](#), [The Telegraph](#), [South China Morning Post](#), [New York Post](#), [Daily Mail](#), [Newstalk](#), [The Ladders](#), [Mind Body Green](#), [Study Finds](#), [Reed College Magazine](#)

***Efficacy of Headcases*** – Jolly, Sadhukha, & Chang, 2020 ([Altmetric=16](#))

Commentary

[On measuring head motion and effects of head molds during fMRI](#) – Lynch et al., 2021  
[Response to Lynch et al., 2021](#)

Press

[practical fMRI](#)

***Socially transmitted placebos*** – Chen et al., 2019 ([Altmetric=915](#))

Commentary

[Subtle cues transmit placebo effects](#) – Harald Walach

Press

[NPR](#), [NIH Research Matters](#), [ParsingScience](#), [PsyPost](#), [Healio](#), [Elemental](#), [Medical News Today](#), [Cosmos Magazine](#), [Daily Mail](#), [The Telegraph](#), [Medical Economics](#),

***Brain Dynamics during Movie Watching*** - van der Meer et al., 2019 ([Altmetric=99](#))

Press

[Science of Learning](#)

***Flatland Fallacy*** – Jolly & Chang ([Altmetric=151](#))

Awards

TopiCS - Top Downloaded Paper 2018-2019

***Moral Opportunism*** - van Baar, Chang, & Sanfey, 2018 ([Altmetric=213](#))

Press

[AAAS](#), [TechTimes](#), [Science Codex](#), [The Tribune](#), [The Pioneer](#), [Business Standard](#)

*Other-Regarding Preferences*, Sul et al., 2017 (Altmetric=152)

Press

[MedicalXpress](#), [Business Standard](#), [Health Medicine Network](#)

*Trust* - Fareri\*, Chang\*, & Delgado, 2015 (Altmetric=48)

Press

[CNN](#), [Forbes](#), [Psychology Today](#), [Newsy](#), [Madam Noire](#), [Salon](#)

*Picture Induced Negative Emotion Signature* – Chang, et al., 2015 (Altmetric=176)

Press

[Quartz](#), [Forbes](#), [Mental Floss](#), [Medical Daily](#), [Forbes](#), [PsyBlog](#), [PsyPost](#), [Science World Report](#), [Boulder Daily Camera](#)

Awards

[PloS biology top 10%](#)

*Guilt* – Chang, et al., 2011 (Altmetric=27)

Press

[Tucson Weekly](#), [Science Daily](#), [Big Think](#), Epoch Times, Il Corriere, [Med India](#), [BMED Report](#), [UA News](#)

## Interviews

[Making Research Personal](#) – Association for Psychological Science

[Transmitting Placebo Effects](#) – Parsing Science Podcast

[2019 Janet Taylor Spence Award](#) – Association for Psychological Science