Luke J. Chang

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May 2021

Employment May 2021		
2015 - Present	Assistant Professor, Department of Psychological and Brain Sciences, Quantitative Biomedical 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		
Pending	Co-PI, R01 National Institute on Drug Abuse Neural mechanisms of social connection	
Pending	Co-I, R21 National Institute of Mental Health Modulation of emotion perception and memory via basolateral amygdala stimulation in humans	
2021-Present	Co-I, R01 National Institute of Mental Health Neural and Molecular Mechanisms Underlying Stress-Induced Inflammatory Responses	
2020-Present	PI, Remote Experiential Learning Mini-Grant Dartmouth Center for the Advancement of Learning Experiential learning in an online neuroimaging methods laboratory course	
2019-Present	PI, CAREER 1848370 National Science Foundation Neural and computational basis of guilt in decision-making	
2018-Present	PI, R01MH116026-01 National Institute of Mental Health. Dynamic brain representations underlying emotional experience	
2018-2020	PI, R56 MH080716 National Institute of Mental Health. Prefrontal-Amygdala interaction in social-learning	
2017 - Present	PI, The Nelson A. Rockefeller Center at Dartmouth College, Faculty Research Grant.	

	Improving healthcare decisions: Managing emotions in social decision-making with exogenous constraints
2017 – 2018	Co-Pl, Chiang Ching-kuo Foundation for International Scholarly Exchange. Towards a computational understanding of social status and mianzi in Chinese and American Cultures
2016 – 2017	PI, Neukom Institute for Computational Science, CompX Grant Crowd sourced development and validation of Neuro-computational models of affect
2014 – 2016	Co-I, National Institute of Health, Big Data to Knowledge (PI: Tor Wager) fMRI-based Biomarkers for Multiple Components of Pain
2012 – 2015	Co-I, National Institute of Health (PI: Tal Yarkoni) Large-scale automated synthesis of functional neuroimaging data
2009 – 2012	PI, National Institute of Mental Health, National Research and Service Award. Mechanisms Underlying Social Cooperative Behavior

Awards & Fellowships

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

Publications

<u>Underlined</u> authors are current or former trainees (postdoctoral, graduate, undergraduate, and research assistants).

- 1) <u>Cheong, J.H., Molani, Z., Sadhukha, S., & Chang, L.J.</u> (In Press). Synchronized emotions in shared experiences increase social connection. *Nature Communications Biology*.
- 2) 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.

- 3) <u>Jolly, E.</u> & **Chang, L.J.** (2021). Gossip drives vicarious learning and facilitates robust social connections. *Current Biology 31, 1-11*.
- 4) 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.*
- 5) <u>Jolly, E., & Chang, L.J.</u> (2021) Spatial feature selection in multivariate pattern analysis. *Social Cognitive Affective Neuroscience.*
- 6) <u>Clark, M.D.,</u> & **Chang, L.J.** (2021). Surprise signals changing affective experiences in naturalistic sports spectating. *Neuron*.
- 7) 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.
- 8) <u>Jolly, E.*, Sadhukha, S.</u>, & **Chang, L.J.** (2020). Response to Lynch et al: On measuring head motion and effects of head molds during fMRI. *Neuroimage*.
- 9) 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*.
- 10) <u>Jolly, E.*, Sadhukha, S.*</u>, & **Chang, L.J.** (2020). Headcases do not reduce head motion during natural viewing and speech. *Neuroimage*. *denotes equal contributions.
- 11) Gonzalez, B., & Chang, L.J. (2020). Arbitrating computational models of observational learning. *Neuron* 106, 558-560.
- 12) <u>Chen, P.H., Jolly, E., Cheong, J.H., & Chang, L.J.</u> (2020). Inter-subject representational similarity analysis reveals individual variation in affective experience when viewing erotic movies. *Neuroimage*, 216.
- 13) 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.
- 14) Gonzalez, B. & Chang, L.J. (In Press). Computational models of mentalizing. In *Theory of Mind*. Gilead, M & Ochsner, K. (Eds).
- 15) 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.
- 16) <u>Cheong, J.H., Brooks, S.,</u> & **Chang, L.J.** (2019). FaceSync: Open source framework for recording facial expressions. *F1000 Research*, 8.
- 17) 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*.
- 18) <u>Van Baar, J.</u>, **Chang, L.J.**, & Sanfey, A.G. (2019). Neural and computational substrates of moral phenotypes in social decision-making. *Nature Communications*, 10 (1) 1483.
- 19) Fareri, D.S., **Chang, L.J.**, & Delgado, M.R. (2019). Mechanisms of social learning. In *The Cognitive Neurosciences* 6th edition. Gazzaniga, M.S (Ed). MIT Press.

- 20) <u>Jolly, E.</u>, & **Chang, L.J.** (2019). The Flatland Fallacy: Moving beyond low dimensional thinking. *Topics in Cognitive Science*, 11(2), 433-454.
- 21) 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.
- 22) **Chang, L.J.** & <u>Jolly, E</u>. (2018). Emotions as computational signals of goal error. In *Nature of Emotion*, Fox, D., Lapate, R., Shackman, A., & Davidson, R.J (Eds). Oxford Press.
- 23) 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*.
- 24) 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.
- 25) <u>Cheong, J.H., Jolly, E., Sul, S., & Chang, L.J.</u> (2017). Computational models in social neuroscience. In Computational Models of Brain and Behavior, Moustafa, A (Ed), Wiley-Blackwell.
- 26) <u>Sul, S.</u>, 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.
- 27) 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*.
- 28) Taylor, V., Chang, L.J., Rainville, P., & Roy, M. (2017). Learned Expectations and Uncertainty Facilitate Pain during Classical Conditioning. Pain, 158(8), 1528-1537.
- 29) 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.*
- 30) 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.
- 31) 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.
- 32) <u>De La Vega, A., Chang, L.J.,</u> Banich, M.T., Wager, T.D., & Yarkoni, T. (2016). Meta-analytic functional analysis of human medial frontal cortex reveals tripartite organization. *Journal of Neuroscience*.
- 33) 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.
- 34) Wager, T.D., Atlas, L.Y., Botvinick, M., **Chang, L.J.**, Coghill, R.C., Davis, K.D., lannetti, 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.*
- 35) 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*.

- 36) Chang, L.J. & Smith, A. (2015). Social emotions and psychological games. *Current Opinions in Behavioral Sciences*, 5:133-140.
- 37) 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.
- 38) 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.
- 39) **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.
- 40) **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.
- 41) Sanfey, A.G., Stallen, M., & Chang, L.J. (2014). Norms and expectations in social decision-making. *Trends In Cognitive Science*, 18(4), 172-174.
- 42) **Chang, L.J.** & Koban, L. (2013). Modeling emotion and learning of norms in social interactions. *Journal of Neuroscience*, 33(18), 7615-7617.
- 43) 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.
- 44) **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.
- 45) 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.
- 46) 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.
- 47) 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.
- 48) 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.
- 49) **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.
- 50) Van't Wout, M, Chang, L.J., & Sanfey, AG. (2010). Emotion regulation and social interactive decision-making. *Emotion*, 10(6), 815-821.
- 51) 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.
- 52) **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.

- 53) Chang, L.J. & Sanfey, A.G. (2008). Emotion, decision-making, and the brain. In D. Houser & K. McCabe (Eds.), Neuroeconomics. Elsevier, 31-53.
- 54) 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.
- 55) 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.
- 56) Butler, T., Pan, H., Tuescher, O., Engelien, 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.
- 57) 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.
- 58) 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

- 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.
- <u>Templeton, E.M., Chang, L.J.</u>, Reynolds, E.A., LeBeamont, M.D., & Wheatley, T.P. *Clicking in conversation:* Short gaps between turns signal connection. Manuscript Under Review.
- Cheong, J.H., Xie, T.K., Byrne, S.K., & Chang, L.J. Py-Feat: Facial expression analysis toolbox. Manuscript Under Review.
- 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.
- 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 Review.
- Muscatell, 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.

- Xie, T.K., Cheong, J.H., 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 in Preparation.
- <u>Jolly, E., Farrens, M., Greenstein, N., Eisenbarth, H., Reddan, M., Andrews, E., Wager, T.D., & Chang, L.J. Recovering sparse emotional ratings with collaborative filtering.</u> Manuscript in Preparation.
- 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. *Effect size and test-retest reliability of the fMRI-based Neurologic Pain Signature.* Manuscript in Preparation.
- Chen, P.Y, Fareri, D., Güroğluj, B., Delgado, M.R., & Chang, L.J. Towards a neurometric-based construct validity of trust. Manuscript in Preparation.
- Begunova, L., Jolly, E., & Chang, L.J. A meta-analysis of Inter-Subject Correlations. Manuscript in Preparartion
- <u>Li, X.,*, Nguyen, K.*, Begunova, L., Ranger, M., Tomova, L., Chen, P.Y., & Chang, L.J. A sensitive and specific neural signature of reward.</u> Manuscript in Preparation. *denotes equal contributions.
- <u>Jolly, E.</u>, Smith, A., & **Chang, L.J.** *Guilt-aversion motivates harm minimization in surrogate decision-making.*Manuscript in Preparation.
- Gonzalez, B., van Baar, J. & Chang, L.J. Modeling mentalizing using inverse reinforcement-learning. Manuscript in preparation.
- Brandt, A., Smith, A.C., & Chang, L.J. Guilt-aversion motivates returning lost wallets. Manuscript in preparation.
- van Baar, J., Chang, L.J., & Sanfey, A.G. Diffusion of responsibility affects amends-making after harmful group decisions. Manuscript in preparation.
- **Chang, L.J.**, Burnashev, A., & Wager, T.D. Crowd sourced training and validation of multivariate models of psychological states with neuro-learn. Manuscript in Preparation.
- **Chang, L.J.,** Gianaros, P.J., Gross, J., Manuck, S., & Wager, T.D. *Reappraisal alters the construction of negative affect.* Manuscript in Preparation.
- Chang, L.J., <u>Robustelli, B.</u>, Whisman, M., & Wager, T.D. *The analgesic effects of romantic relationships.* Manuscript in Preparation.
- Yarkoni, T, <u>De La Vega, A.</u>, & **Chang, L.J.** Fully automated meta-analytic clustering and decoding of human brain activity. Manuscript in Preparation.

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
- 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

Selected Open-Source Software Packages

- **nltools**. A suite of Python tools for conducting multivariate analysis of neuroimaging data http://nltools.org/
- **neuro-learn**. Cloud-based predictive modeling of neuroimaging http://neuro-learn.org
- **emotionCF**. A Python toolbox for performing collaborative filtering on emotion datasets https://github.com/ljchang/emotionCF
- **py-feat**. A Python toolbox for analyzing and visualizing facial expression data https://py-feat.org/
- **facesync**. A Python toolbox for synchronizing videos based on audio features. https://github.com/cosanlab/facesync

Chaired Symposia, Workshops, & Summer Schools

2016

2020	Co-Director of 9-day Methods in Neuroscience at Dartmouth Computational Summer School on "Interacting Minds", Hanover, NH
2020	Co-Organizer of SANS preconference workshop on "Computational Social and Affective Neuroscience" (Cancelled due to Covid-19)
2019	Co-Chair 8 th Annual Affective Computing and Intelligent Interaction Meeting Special Session "Neural & Psychological Models of Affect", Cambridge, UK
2019	Co-Director of 9-day Methods in Neuroscience at Dartmouth Computational Summer School on "Cognitive Maps", Hanover, NH
2019	Co-Director of 14-day Summer Institute in Cognitive Neuroscience Summer School on "Computational Social Neuroscience: Advances, Challenges, and New Directions", Santa Barbara, CA
2019	Co-Organizer of SANS preconference workshop on "Computational Social and Affective Neuroscience"
2018	Co-Director of 9-day Methods in Neuroscience at Dartmouth Computational Summer School of "Narratives and Natural Contexts", Hanover, NH,
2017	Co-Director of 8-day Methods in Neuroscience at Dartmouth Computational Summer School of "Multiscale Network Dynamics", Hanover, NH
2017	Co-Organizer of Dartmouth BrainHack (4-day department neuroscience hackathon), Hanover, NH
2016	Co-Chair Society for Neuroscience Nanosymposium "Insights into human cognition and emotion using large-scale neuroinformatics" Nanosymposium, San Diego, CA

Co-Chair for "Dartmouth Affective Neuroscience Symposium", Hanover, NH

Co-Chair for "Computational approaches to social affective neuroscience" at the 7th 2014

Annual Social Affective Neuroscience Society Meeting, Denver, CO

Co-Organizer of a 3-day workshop, University of Arizona School, Tucson, AZ, 2010

"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

NIH Computational Psychiatry Special Review Panel 2020

2019 - Present Affective Computing & Intelligent Interactions Program Committee

2019 - Present Editorial Board - Affective Science

2019 - Present Max Planck Center for Language, Music, & Emotion Affiliate

NIH Computational Psychiatry Special Review Panel 2019

2018 NIH MESH Review Panel

Society for Affective Science Journal Advisory Board 2018 - Present 2018 - 2020 Program Committee Social Affective Science Meeting

2018 - Present Scientific Advisory Board for Mind Trace https://mind-trace.com/

Reviewer Cosyne Meeting 2016 Review Editor for Emotion 2016 – Present

Organizing Committee Social Affective Neuroscience Meeting 2015-2016

Review Editor Frontiers in Emotion Science 2014 - 2016

Guest Lecturer in University of Colorado Science Discovery Program for adolescents Summer 2013

Psychology Department Mini-Convention Organizer 2008

2006 - 2008Psychology Department Graduate Student Representative

Invited Talks

Sen 2021

06p 202 i	Comparational repetites of Frenchial Cortex, Oxford, Oxford,
May 2021	University of Maryland College Park, College Park, MD
Oct 2020	Technology in Psychiatry Summit, Boston, MA
May 2020	Nilearn Machine Learning Workshop, Montreal, Quebec (Withdrew)
Mar 2020	Transforming the Practice of Mental Health Care, NIMH Panel
Mar 2020	Program in Placebo Studies & Therapeutic Encounters, Harvard Medical School
Jun 2020	Organization for Human Brain Mapping. Montreal. Quebec

Computational Properties of Prefrontal Cortex, Oxford, LIK

Jun 2020 Interdisciplinary Symposium on Decision Neuroscience, Philadelphia, PA (Cancelled)

University of Southern California, Los Angeles, CA Mar 2020

Feb 2020 Brown University, Providence, RI

Feb 2020 Johns Hopkins University, Baltimore, MD Jan 2020 Columbia University, New York, NY Dec 2019 New York University, New York, NY Dec 2019 Princeton University, Princeton, NJ Nov 2019 Max Planck, Frankfurt, Germany

Affective Computing and Intelligent Interactions, Cambridge, UK Sept 2019 July 2019 Reinforcement Learning & Decision-Making, Montreal, Quebec Summer Institute in Cognitive Neuroscience, Santa Barbara, CA June 2019

May 2019 Association for Psychological Science, Washington DC

Victoria University, Wellington, NZ Mar 2019

Mar 2019 Brain functional organization and connectivity workshop, Noosa, Australia

F 1 0010	Control of the His Africa Advisor Advisor
Feb 2019	Center for Healthy Minds, Madison, WI
Feb 2019	University of Wisconsin Madison Colloquium, Madison, WI
Nov 2018	Society for Neuroscience Nanosymposium, San Diego, CA
Nov 2018	Society for Neuroscience Minisymposium, San Diego, CA
Sep 2019	Austen Riggs Computational Neuroscience Workshop, The Berkshires, MA
Aug 2018	Dartmouth Hitchcock Medical Center Department of Neurology, Lebanon, NH
May 2018	Association for Psychological Science, San Francisco, CA
Apr 2018	Society for Affective Science, Los Angeles, CA
Mar 2018	Computational Systems Neuroscience Meeting, Breckenridge, CO
Mar 2018	Society for Personality and Social Psychology, Atlanta, GA
Feb 2018	Templeton Roundtable, 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 21st Annual Neuroscience Day, Hanover, NH
May 2017	Multimodal Neuroimaging Training Program, Pittsburgh, PA
-	New England Research Decision-Making Group (Brown University)
May 2017	
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 https://dartbrains.org/

Social and Affective Motivations in Decision-Making, Dartmouth College http://cosanlab.com/static/syllabi/PSYC53 Syllabus.pdf

Experimental Study of Social Behavior, Dartmouth College http://cosanlab.com/static/syllabi/PSYC63_Syllabus.pdf https://github.com/ljchang/psyc63

The Power of Beliefs, Dartmouth College 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
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2015-2016	Sunhae Sul (Faculty: Pusan National University)
2015-2018	Seth Frey (Faculty: University of California Davis)
2016-2019	Pin-hao (Andy) Chen (Faculty: National Taiwan University)
2019-Present	Eshin Jolly

Primary Doctoral Students

2015-2021	Jin Cheong (Facebook)
2015-2019	Eshin Jolly (Postdoc: Dartmouth College)
2017-2019	Daisy Burr (Transferred to Duke University)
2017-2018	Kristina Rapuano (Postdoc: Yale University)
2016-Present	Emma Templeton (co-advised with Thalia Wheatley)
2017-Present	Bryan Gonzalez
2018-Present	Marissa Clark
2019-Present	Tiankang Xie (Quantitative Biomedical Science Program)
2021-Present	Wasita Mahaphanit

Visiting Students

Fall 2013	Hongbo Yu (Peking University)
Spring 2017	Jeroen van Baar (Donders Institute)
Fall 2017	Xiaoxue Gao (Peking University)

Dissertation Committee

2021 – Pres	Jeff Brooks, NYU (Advisor: Jeff Brooks)
2019 – Pres	Dae Houlihan, MIT (Advisor: Rebecca Saxe)

	0010 Dros	Villan Hairaraitra of Varmont (Advisory Datriaia Dralagle)
	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 Con	nmittee
	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)
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	2017	Feilong Ma (Advisor: James Haxby)
	2017	Vassiki Chauhan (Advisor: Ida Gobbini)
Undergraduate Thesis & Independent Research Project		
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	2021	Anthony Milne (QSS Independent Research Project)
	2021	Maryam Iqbal (Neuroscience Thesis)
	2021	Liza Begunova (Neuroscience Thesis)
	2021	Emily Chen (Neuroscience Thesis)
	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)
	2020	Sophie Byrne (Psychology Thesis) - won Lt. William Brewster Nickerson 1964 Psychology and
		Brain Sciences Prize
	2020	Max Farrens (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)
	2019	Karina Lopez (Neuroscience Independent Research Project)
	2019	Nathan Greenstein (Cognitive Science Independent Research Project)
	2019	Samantha Milne (Cognitive Science Independent Research Project)
		, ,
	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)
	2018	Sushmita Sadhukha (Neuroscience Independent Research Project)
	2018	Zohra Aslami (Neuroscience Thesis w/ Wilder Doucette)
	2018	Elizabeth Reynolds (Psychology Thesis w/ Thalia Wheatley)
	2017	Dawit Workie (QSS Thesis)
	2017	Hirsh Elhence (Neuroscience Independent Research Project)
	2017	Helen Schlactenhaufen (Psychology Independent Research Project)
	2016	Pon Mistogram (Computer Science Indonendant Possersh Project)

Dan Whitcomb (Computer Science Independent Research Project)

2016

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 Reconomic 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