

Eshin Jolly

Dartmouth College
Dept of Psychological and Brain Sciences
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Currently **Postdoctoral Fellow** 2019-
Cosan Lab, Dartmouth College, Hanover, NH
PI: Luke J. Chang

Education **Dartmouth College**, Hanover, NH 2012-2019
PhD, Cognitive Neuroscience
Thesis: Social Cognitive Maps: A Relational Account of Person Representation and Memory

University of Rochester, Rochester, NY 2006-2010
BA, Brain and Cognitive Science/Psychology
Minor, Music
Thesis: Testing Domain Specificity: Conceptual Knowledge of Living and Non-living Things

Employment **Visiting PhD Researcher** summer 2016
Microsoft Research, New York City, NY
PIs: Duncan Watts & Sid Suri

Lab Manager 2010-2012
Harvard University, Cambridge, MA
PI: Jason P. Mitchell

Research Experience **University of Rochester**, Rochester, NY 2009-2010
PIs: Jessica F. Cantlon & Bradford Z. Mahon
Honors Thesis Student

Baruch College, New York City, NY 2008-2010
PI: Jennifer Mangels
Research Assistant

Mt Hope Family Center, University of Rochester, Rochester, NY 2008-2010
PI: Sheree Toth; Mentor: Jack Peltz
Research Assistant

Manuscripts

Under review/revision Gao, X., **Jolly, E.**, Yu, H., Liu, H., Zhou, X., Chang, L. J. (under review). The hidden cost of receiving favors: A theory of indebtedness. [bioRxiv](#)

Jolly, E. & Chang, L.J. (under review). Gossip drives vicarious learning and facilitates robust social connections. [psyArXiv](#)

Chang, L.J., **Jolly, E.**, Cheong, J.H., Rapuano, K., Greenstein, N., Chen, P.A. & Manning, J.R. (under revision). Endogenous variation in ventromedial

prefrontal cortex state dynamic during naturalistic viewing reflects affective experience. [bioRxiv](#)

In Prep

Jolly, E., Cheong, J.C. & Chang, L.J. (in prep). Neural models reflect spontaneous impression formation about parasocial relationships.

Jolly, E., Smith A., Gangadharan, A.A., Hoidal, A.S. & Chang, L.J. (in prep). Guilt-aversion motivates harm-minimization in surrogate decision-making.

Published

2020

Jolly, E.*, Sadhukha, S.*, Chang, L.J. (in press). Custom-molded headcases have limited efficacy in reducing head motion during naturalistic fMRI experiments. *NeuroImage*. [[Link](#)] [[data & materials](#)]

*Equal contribution

Chen, P. H. A., **Jolly, E.**, Cheong, J. H. & Chang, L. J. (2020). Intersubject representational similarity analysis reveals individual variations in affective experience when watching erotic movies. *NeuroImage*, 116851. [[PDF](#)]

2019

Chen, P.A., Cheong, J.H., **Jolly, E.**, Elhence, H., Wager, T.D., Chang, L.J. (2019). Socially transmitted placebo effects. *Nature Human Behavior*, 3, 1295-1305. [[PDF](#)]

Jolly, E.*, Tamir, D.I.*, Burum, B.A. & Mitchell, J.P. (2019). Wanting without enjoying: The social value of sharing experiences. *PLoS One*, 14(4), e0215318. [[PDF](#)]

*Equal contribution

Jolly, E., & Chang, L.J. (2019). The Flatland Fallacy: Moving Beyond Low Dimensional Thinking. *Topics in Cognitive Science*, 1-22. [[PDF](#)]

2018

Jolly, E. (2018). Pymer4: Connecting R and Python for linear mixed modeling. *Journal of Open Source Software*, 3(31), 862. [[PDF](#)]

Chang, L. J. & **Jolly E.** (2018). Emotions as computational signals of goal error. In A. Fox, R. Lapate, A. Shackman & R. Davidson (Eds), *The Nature of Emotion* (343-351). Oxford University Press. [[PDF](#)]

2017

Cheong, J.C., **Jolly, E.**, Sul, S. & Chang, L.J. (2017). Computational Models in Social and Affective Neuroscience in Moustafa, A. (Eds), *Computational Models of Brain and Behavior* (229-245). Hoboken, NJ: Wiley. [[Link](#)]

Rane, S.*, **Jolly, E.***, Park, A.*, Jang, H*. & Craddock, R.C. (2017). Developing predictive biomarkers using whole-brain classifiers: Application to the ABIDE I dataset. *Research Ideas and Outcomes*, 3:e12733. [[PDF](#)].

*Equal contribution

2011-2016

Moran, J.M., **Jolly, E.** & Mitchell, J.P. (2014). Spontaneous mentalizing predicts the fundamental attribution error. *Journal of Cognitive Neuroscience*, 26(3), 569-576. [[PDF](#)]

Moran, J.M., **Jolly, E.** & Mitchell, J.P. (2012). Social-cognitive deficits in normal aging. *Journal of Neuroscience*, 32(16), 5553-5561. [[PDF](#)]

Jolly, E. (2011). Testing domain specificity: Conceptual knowledge of living and non-living things. *The Yale Review of Undergraduate Research in Psychology*, 2, 94-118. [[PDF](#)]

<p>Why Design Abstractions Matters for Analytics Tools: Neuroimaging analysis with Neuro-Learn.</p> <p>Symposium talk at Scientific Computing with Python Virtual conference (in-person cancelled)</p> <p>Spontaneous Neural Representations of Social Relationships in Naturalistic Contexts.</p> <p>Symposium talk at Society for Affective Science, San Francisco, CA. (conference cancelled)</p>	2020
<p>Introduction to Git and Github.</p> <p>Lecture at Methods in Neuroscience Computational Summer School, Dartmouth College, Hanover, NH.</p>	2019
<p>Introduction to Git and Github.</p> <p>Lecture at Methods in Neuroscience Computational Summer School, Dartmouth College, Hanover, NH.</p> <p>Introduction to Jupyter Notebooks for Interactive Data Analysis.</p> <p>Lecture at Methods in Neuroscience Computational Summer School, Dartmouth College, Hanover, NH.</p> <p>Introduction to functional alignment methods for fMRI.</p> <p>Lecture at Sao Paulo School of Advanced Science on Social and Affective Neuroscience. Sao Paulo, Brazil.</p>	2018
<p>The Social Benefits of Gossip</p> <p>Presentation at the New England Research on Decision-Making conference, Brown University, Providence, RI.</p> <p>Computational tools for neuroscience: Containers and Jupyter Notebooks.</p> <p>Lecture at Methods in Neuroscience Computational Summer School, Dartmouth College, Hanover, NH.</p> <p>Introduction to Singularity: Running containers on a HPC.</p> <p>Tutorial at Graduate research roundtable workshop, Dartmouth College, Hanover, NH.</p> <p>Introduction to git and github for psychologists.</p> <p>Presentation at the Reproducible Psychological Science workshop at the Annual Meeting for the Association for Psychological Science, Boston, MA.</p> <p>Interpersonal dynamics and the inelasticity of social guilt.</p> <p>Presentation at the Boston Area Moral Cognition Group, Boston, MA.</p> <p>Interpersonal dynamics and the inelasticity of social guilt.</p> <p>Presentation at Affectiva, Boston, MA.</p> <p>Spontaneous impression-formation about parasocial relationships.</p> <p>Presentation at the Annual Meeting of the Social and Affective Neuroscience Society, Los Angeles, CA.</p> <p>Introduction to Jupyter Notebooks (and why you should love them!).</p> <p>Tutorial at Brainhack Dartmouth College, Hanover, N.H.</p> <p>Research Methods for Conducting Synchronous Online Experiments.</p> <p>Guest Lecture at Dartmouth College, Hanover, NH.</p> <p>Contemporary fMRI pre-processing: Introduction to Nipype and Docker.</p> <p>Tutorial at Dartmouth College, Hanover, NH.</p> <p>State of the Data: Annual Dartmouth Brain Imaging Center Quality Assurance Report.</p> <p>Presentation at Dartmouth College, Hanover, NH.</p>	2017
<p>Field experiments on human prosociality using Mechanical Turk.</p> <p>Presentation at Microsoft Research, New York, NY.</p>	2016

Research Methods for Conducting Synchronous Online Experiments.
Guest Lecture at Dartmouth College, Hanover, NH.

The Social Benefits of Gossip.
Guest Lecture at Dartmouth College, Hanover, NH.

The Social Benefits of Gossip.
Presentation at the Social Brain Sciences Brown Bag series at Dartmouth College, NH.

Posters & Conference Proceedings

- Jolly, E.** (2020). Pymer4: Bringing R's Powerful Mixed-modeling to Python.* 2020
Virtual poster at Scientific Computing with Python Virtual Conference. (in-person cancelled).
*Winner, Scipy Scholarship
- Jolly, E.** & Chang, L.J. (2020). Spontaneous Neural Representations of Social Relationships in Naturalistic Contexts.*
Poster at Social Affective Neuroscience Society meeting, Santa Barbara, CA. (conference cancelled).
*Winner, SANS Poster Award
- Jolly, E.** & Chang, L.J. (2019). Gossip drives vicarious learning and facilitates robust social connections. 2019
Poster at Social and Affective Neuroscience Society meeting, Miami, FL.
Cheong, J.C., Chen, P.A., **Jolly, E.**, Elhence, H., Wager, T.D., Chang, L.J. (2019). Socially transmitted placebo effects.
Poster at Society for Affective Science meeting, Boston, MA.
- Jolly, E.**, Reddan, M.C., Gianaros, P.J., Manuck, S.M. Chang, L.J., Wager, T.D. 2018
(2018). NeuroLIME: A novel tool for explaining the predictions of complex brain models.
Poster at Social and Affective Neuroscience Society meeting, New York, NY.
Reddan, M.C., **Jolly, E.**, Wager, T.D. (2018). NeuroLIME: A novel tool for explaining the predictions of nonlinear neuroimaging classifiers.
Poster at the Organization for Human Brain Mapping meeting, Singapore, Singapore.
Reddan, M.C., **Jolly, E.**, Wager, T.D. (2018). NeuroLIME: A novel tool for explaining the predictions of nonlinear neuroimaging classifiers.
Poster at the Computational and Systems Neuroscience meeting, Denver, CO.
- Jolly, E.** & Chang, L.J. (2017). Gossip drives vicarious learning and facilitates robust social connections. 2017
Poster at the Annual Meeting of the Association for Psychological Science, Boston, MA.
Cheong, J.H., **Jolly, E.** & Chang, L.J. (2017). A window into the mind: A computational approach to measuring emotions in response to naturalistic stimuli.
Poster the Annual Meeting of the Social and Affective Neuroscience Society, Los Angeles, CA.
- Jolly, E.** & Chang, L.J (2016). Groups, gossip and social dilemmas. 2016
Poster at the International Conference on Computational Social Science, Evanston, IL.
- Jolly, E.**, Tamir, D.I. & Mitchell, J.P. (2015). The social value of sharing experiences.* 2015
*Winner, SANS Poster Award
Poster at the Annual Meeting of the Social and Affective Neuroscience Society, Boston, MA.

	Moran, J.M., Jolly, E. , & Mitchell, J.P. (2012). Spontaneous mentalizing supports the fundamental attribution error. Poster the Annual Meeting of the Cognitive Neuroscience Society, Chicago, IL.	2012
	Peltz, J.S. Toth, S.L., Rogosch, F.A., Jolly, E. , & Cicchetti, D. (2010). Paternal emotional availability's effects on children's socioemotional functioning in maternal depression contexts. Poster at the Annual Meeting of the Association for Psychological Science, Boston, MA.	2010
Awards	Scientific Computing with Python Scholarship Award	2020
	Social Affective Neuroscience Society Poster Award	
	Kavli Summer Institute in Cognitive Neuroscience	2019
	Dartmouth Thayer Consulting Case Competition 1st Place	
	Hack Dartmouth Finalist	
	Hack Dartmouth Best Community Hack	2018
	Sao Paulo Summer School on Social and Affective Neuroscience (SPSAN)	
	Dartmouth Graduate Arts and Science Travel Award	
	Dartmouth PBS Graduate Travel Award	
	Neukom Institute Travel Award	
	Dartmouth Graduate Alumni Research Award	2017
	Dartmouth PBS Graduate Travel Award	
	Methods in Neuroscience Computational Summer School	
	Summer School in Social Neuroscience and Neuroeconomics	
	Social Affective Neuroscience Society Trainee Data Blitz Award	
	Human Neuroimaging Methods Travel Award	
	Hack Dartmouth 2nd Place project award	2016
	Neurohackweek Summer School	
	Social Affective Neuroscience Society Poster Award	2015
	Dartmouth PBS Graduate Travel Award	
	National Science Foundation Graduate Research Fellowship	2013-2016
	University of Rochester BCS Dept: Highest Honors in research	2010
	University of Rochester Wilde-Trustee Scholarship	2006-2010
Teaching	Functional Alignment Techniques in fMRI (Guest Lecturer) Mackenzie Presbyterian University, SPSAN, Sao Paulo, Brazil	2018
	Methods in Neuroscience Computational Summer School (TA) Dartmouth College	
	Methods in Neuroscience Computational Summer School (TA) Dartmouth College	2017
	Experimental Study of Social Behavior (Guest Lecturer) Dartmouth College	
	Experimental Study of Social Behavior (Guest Lecturer) Dartmouth College	2016
	Social Psychology (Guest Lecturer) Dartmouth College	

Brain Mapping with functional MRI (TA and Guest Lecturer) Dartmouth College	2015
Laboratory in Psychological Science* (TA and Guest Lecturer) *Mentored award winning undergraduate group Dartmouth College	
Experimental Design and Methodology (TA and Guest Lecturer) Dartmouth College	2014
Laboratory in Psychological Science (TA and Guest Lecturer) Dartmouth College	2013
Introduction to MATLAB for Behavioral Research (ad-hoc workshop) Harvard University	2011
Mind Perception (ad-hoc workshop) Harvard University	

Mentorship

Maryam Iqbal '21 Presidential Scholar/Honors Thesis Dartmouth College	2017-
Nathan P. Greenstein '19 Presidential Scholar Dartmouth College	2017-2019
Sushmita Sadhukua '18 Full-time Research Assistant Dartmouth College	2017-2019
Arati A. Gangadharan '18 Honors Thesis Dartmouth College	2015-2018
Hirsh Elhence '17 Presidential Scholar Dartmouth College	2015-2017

Technical Skills

Programming Languages Python, R, Matlab, Javascript, Bash
Frontend Web Development HTML, CSS, Bootstrap, Bulma, Vue, Svelte
Backend/Fullstack/App Development Node, Express, Meteor, MongoDB, Firebase, Flask, Electron
Stimulus Presentation Psychopy, Psychophysics toolbox, E-prime, Presentation
Data Analysis Scientific-Python, Statsmodels, Scikit-learn, Lme4
Neuroimaging Analysis FSL, AFNI, SPM, Nipype, Nilearn
Data Visualization Seaborn/Matplotlib, D3, Dash/Plotly, ggplot
Dev Ops Git/Github, TravisCI, Tox, Pytest, Moab-Torque

Professional Activities

Reviewer SCAN, JOSS, NeuroImage, PLoS One ad-hoc: Nature Communications, SIGCHI, Frontiers in Psych, JPSP
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Society Memberships

Social and Affective Neuroscience Society, Society for Affective Science,
Organization for Human Brain Mapping, Cognitive Neuroscience Society

Leadership & Community

<u>Code for America</u> Member , Code for Upper Valley Brigade	2019-Present
<u>Line@ Project</u> Co-Founder , Dartmouth College	2017-Present
<u>Pymer4</u> Project Lead , Open Source Software	2017-Present
<u>Neuro-learn</u> Core Contributor , Open Source Software	2016-Present
Web and Desktop Application Development Freelance Software Developer	2017-Present
Introductory data analysis with Python Private Tutor	2016-Present
Dartmouth Brainhack Organizing committee member , Dartmouth College	2017
Social Brain Sciences Symposium talk series Primary Organizer , Dartmouth College	2013-2015
Social Area Graduate Student Representative Graduate Representative , Dartmouth College	2013-2015
GWISE Science day for local middle schools Station Leader , Dartmouth College	2014

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