Eshin Jolly

Dartmouth College
Dept of Psychological and Brain Sciences
6207 Moore Hall, Hanover, NH, 03755
(917) 376 3340
eshin.jolly@gmail.com

website | github | twitter | mastodon/fediverse | linkedin

Currently

Postdoctoral Fellow 2020-Present
Consortium for Interacting Minds
Center for Cognitive Neuroscience
Dartmouth College (Hanover, NH)
Mentors: Luke Chang, Thalia Wheatley, Emily Finn, Jeremy Manning

Education & Training

PhD, Cognitive Neuroscience 2012-2019
NSF Graduate Fellow
Dartmouth College (Hanover, NH)
Thesis: Social Cognitive Maps: A Relational Account of Person Representation and Memory
Committee: Luke Chang, Thalia Wheatley, Jeremy Manning, Janice Chen

BA, Brain and Cognitive Science; Psychology 2006-2010
Minor: Music & Jazz Performance
University of Rochester (Rochester, NY)
Thesis: Testing Domain Specificity: Conceptual Knowledge of Living and Non-living Things
Committee: Jessica Cantlon, Brad Mahon, Elissa Newport

Microsoft Research PhD Intern 2016
MSR Computational Social Science Group (NYC, NY)
PIs: Duncan Watts & Sid Suri

Lab Manager 2010-2012
Harvard University (Cambridge, MA)
PI: Jason Mitchell

Research Assistant 2008-2010
Baruch College (NYC, NY)
PI: Jennifer Mangels

Research Assistant
Mt Hope Family Center, University of Rochester (Rochester, NY)
PIs: Sheree Toth & Jack Peltz

Industry Consulting

Senior UX/UI Engineer & Designer 2023-Present
MoreMore AI
Film & media arts startup

Co-Founder & CTO; Scientific Advisor 2020-Present
Parsnip.ai
Food and ed-tech startup

Scientific Advisor 2020
The Sukhi Project
Employee well-being and mental health startup

Project Manager; Technical Support Lead 2019-Present
Code for America (Upper Valley Brigade)
Rural Internet Project

Funding

Postdoctoral Fellow 2019-Present
National Science Foundation, Career Award 1848370 ($886,457, PI: Luke Chang)
Neural and computational basis of guilt in decision-making (co-written)

Graduate Fellow 2013-2016
National Science Foundation, Graduate Research Fellowship ($90,000)
Uncovering the represention of self: A multivariate approach

Manuscripts In Prep

Jolly, E., Chang, L.J. (in prep). Neural encoding and reinstatement of social motifs.

Jolly, E., Ranger, M.S. & Chang, L.J. (in prep). The neural basis of guilt diffusion in interpersonal harm-minimization.

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

Under review/revision

Jolly, E., Sadhukha, S., Iqbal, M., Molani, Z., Walsh, T.M., Manning, J.R., & Chang, L.J. (under review). People are represented and remembered through their relationships with others. [psyarxiv preprint]

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

Published

Jolly, E.*, Cheong, J.H.*, Xie, T.*, Byrne, S. Kenny, M., & Chang, L.J. (2023). Py-Feat: Python Facial Expression Analysis Toolbox. *Affective Science*. [Link] [toolbox] 2023
*Equal contribution

Jolly, E., Farrens, M., Greenstein, N., Eisenbarth, H., Reddan, M.C., Andrew, E., Wager, T.D., & Chang, L.J. (2022). Recovering individual emotional states from sparse ratings using collaborative filtering. *Affective Science*. [Link] [toolbox] [data & materials] 2022

Jolly, E. & Chang, L.J. (2021). Multivariate spatial feature selection in fMRI. *Social Cognitive and Affective Neuroscience, 16(8)*, 795-806. [Link] 2021

Jolly, E. & Chang, L.J. (2021). Gossip drives vicarious learning and facilitates social connections. *Current Biology, 31*, 1-11. [Link] [data & materials]
Coverage: New York Times, VPR News, PNAS Journal Club

Chang, L.J., **Jolly, E.**, Cheong, J.H., Rapuano, K., Greenstein, N., Chen, P.A., & Manning, J.R. (2021). Endogenous variation in ventromedial prefrontal cortex state dynamics during naturalistic viewing reflects affective experience. *Science Advances, 7(17)*, 1-17. [Link] [data & materials]

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,* 117484. [Link] [data & materials] 2020

Jolly, E.*, Sadhukha, S.*, & Chang, L.J. (2020). Custom-molded headcases have limited efficacy in reducing head motion during naturalistic fMRI experiments. *NeuroImage,* 117207. [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] [data & materials]

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*, *3*, 1295-1305. [PDF] [data & materials] 2019

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] [data & materials] *Equal contribution

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

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

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]

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] 2017

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

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] 2011-2016

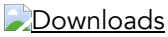
Moran, J.M., **Jolly, E.**, & Mitchell, J.P. (2012). Social-cognitive deficits in normal aging. *Journal of Neuroscience, 32(16)*, 5553-5561. [PDF]

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]

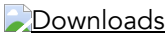
Open Scientific Software

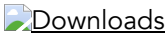
Py-feat 2022-Present
Analysis of facial expressions from images and videos, (Core Developer)

[Documentation] [Slides] [Github]


Neighbors 2020-Present
Predicting affective responses from sparse measurement data, (Project Author)
[Documentation] [Github]


SvelteTurk
Graphical User Interface for managing experiments on Mturk, (Project Author)
[Documentation] [Github]

Pymer4 2017-Present
Statistics library for estimating linear mixed-effects models, (Project Author)
[Documentation] [Github]


Nltools 2016-Present
Toolbox for intuitively analyzing neuroimaging data, (Core Developer)
[Documentation] [Video Talk] [Github]


Invited Talks & Presentations

Representing and remembering people through their relationships. 2023
Invited talk at the MIND Summer School, Dartmouth College (Hanover, NH)

The structure of social memory: People as contexts.
Presentation at the Social and Affective Neuroscience Society conference (Santa Barbara, CA)

Navigating the social world: A relational account of how we represent, remember, and talk about people.
Invited talk at Stanford University (Stanford, CA)

People as contexts: A relational account of person representation and memory.
Invited talk for Innovators in Cognitive Neuroscience (virtual).

Spontaneous Neural Representations of Social Relationships in Naturalistic Contexts. 2022
Symposium presentation at the International Society for Research on Emotion, USC (Los Angeles, CA)

Emotion and Social Perception in Naturalistic Contexts: Perspectives from Affective Computing and Affective Neuroscience.
Symposium organizer at the International Society for Research on Emotion, USC (Los Angeles, CA)

Social Cognitive Maps: A Relational Account of Person Representation and Memory. 2020
Invited talk at Harvard University (Cambridge, MA)

Why Design Abstractions Matters for Analytics Tools: Neuroimaging analysis with Neuro-Learn. [Video]
Symposium presentation at the Scientific Computing with Python conference (virtual)

Spontaneous Neural Representations of Social Relationships in Naturalistic Contexts.
Symposium presentation at the Society for Affective Science conference (San Francisco, CA; cancelled due to COVID-19).

Methodological challenges in contemporary fMRI studies.
Invited talk at the Neuroimaging Analysis Methods meeting, Princeton University (Princeton, NJ)

Introduction to functional alignment methods for fMRI. 2018
Invited lecture at the Sao Paulo School of Advanced Science on Social and Affective Neuroscience (Sao Paulo, Brazil)

Naturalistic approaches towards an understanding of social reasoning and communication. 2017
Invited talk at Stanford University (Stanford, CA)

The social benefits of gossip
Presentation at the New England Research on Decision-Making conference, Brown University (Providence, RI)

Introduction to Git and Github for psychologists.
Invited talk at the Reproducible Psychological Science workshop at the Annual Meeting for the Association for Psychological Science (Boston, MA)

Interpersonal dynamics and the inelasticity of social guilt.
Invited talk at the Boston Area Moral Cognition Group (Boston, MA)

Interpersonal dynamics and the inelasticity of social guilt.
Invited talk at Affectiva Inc (Boston, MA)

Spontaneous impression-formation about parasocial relationships.
Presentation at the Social and Affective Neuroscience Society conference (Los Angeles, CA)

State of the Data: Annual Dartmouth Brain Imaging Center Quality Assurance Report.
Presentation at Dartmouth College (Hanover, NH)

Field experiments on human prosociality using Mechanical Turk. 2016
Presentation at Microsoft Research (New York City, NY)

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

Posters & Conference Proceedings

Jolly, E., Sadhukha, S., Iqbal, M., Molani, Z., Walsh, T.M., Manning, J.R., & Chang, L.J. (2023). The structure of social memory: People as contexts. 2023
Poster at the Social and Affective Neuroscience Society conference (Santa Barbara, CA)

Kwon, D., **Jolly, E.**, Chang, L.J., & Shim, W.M. (2023). Neural representations of dynamic social interactions.
Poster at the 26th Annual Meeting of the Korean Society for Brain and Neural Sciences (Busan, Korea)

Jolly, E., Farrens, M., Greenstein, N., Eisenbarth, H., Reddan, M.C., Andrew, E., Wager, T.D., & Chang, L.J. (2022). Recovering individual emotional states from sparse ratings using collaborative filtering. 2022
Poster at the Society for Affective Science conference (virtual)

Jolly, E. & Chang, L.J. (2021). Spontaneous Neural Representations of Social Relationships in Naturalistic Contexts. 2021

Poster at the Social and Affective Neuroscience Society conference (virtual)
Winner Poster Award

Jolly, E. (2020). Pymer4: Bringing R's Powerful Mixed-modeling to Python. 2020
Poster at the Scientific Computing with Python conference (virtual)
Winner Scipy Scholarship

Jolly, E. & Chang, L.J. (2019). Gossip drives vicarious learning and facilitates robust social connections. 2019
Poster at the Social and Affective Neuroscience Society conference (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 the Society for Affective Science conference (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 the Social and Affective Neuroscience Society conference (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 conference (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 conference (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 Social and Affective Neuroscience Society conference (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
Poster at the Social and Affective Neuroscience Society conference (Boston, MA)
Winner Poster Award

Moran, J.M., **Jolly, E.**, & Mitchell, J.P. (2012). Spontaneous mentalizing supports the fundamental attribution error. 2012
Poster at the Cognitive Neuroscience Society conference (Chicago, IL)

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. 2010
Poster at the Annual Meeting of the Association for Psychological Science (Boston, MA)

Teaching

Introduction to facial expression analysis with py-feat 2023
Tutorial at the Consortium for Interacting Minds
Dartmouth College (Hanover, NH) [Slides]

Introduction to version control for neuroscientists 2019
Lecture at MIND Summer School

Dartmouth College (Hanover, NH)

Introduction to version control for neuroscientists 2018
Lecture at MIND Summer School
Dartmouth College (Hanover, NH)

Computational tools for neuroscience: jupyter notebooks
Lecture at MIND Summer School
Dartmouth College (Hanover, NH)

Functional Alignment Techniques in fMRI
Lecture at Sao Paulo Summer School on Social and Affective Neuroscience (SPSAN)
Mackenzie Presbyterian University (Sao Paulo, Brazil)

Computational tools for neuroscience: Containers and jupyter notebooks 2017
Lecture at MIND Summer School
Dartmouth College (Hanover, NH)

Introduction to Singularity: Running containers on a HPC
Lecture at MIND Summer School
Dartmouth College (Hanover NH)

Introduction to Git and Gitub for social psychologists
Lecture at the Reproducible Psychological Science workshop
Annual Meeting for the Association for Psychological Science (Boston, MA)

Introduction to jupyter notebooks (and why you should love them!)
Tutorial at BrainHack Local
Dartmouth College (Hanover, NH)

Online research methods for the experimental study of social behavior
Research Methods, Guest Lecturer
Dartmouth College (Hanover, NH)

Online research methods for the experimental study of social behavior 2016
Research Methods, Guest Lecturer
Dartmouth College (Hanover, NH)

The social benefits of gossip
Social Psychology, Guest Lecturer
Dartmouth College (Hanover, NH)

Contemporary fMRI pre-processing: Introduction to Nipype and Docker
fMRI Methods, Guest Lecturer
Dartmouth College (Hanover, NH)

fMRI Methods: Brain Mapping with functional MRI 2015
Course TA and Guest Lecturer
Dartmouth College (Hanover, NH)

Research Methods: Laboratory in Psychological Science*
Course TA and Guest Lecturer
*Mentored award winning undergraduate group
Dartmouth College (Hanover, NH)

Introductory Statistics: Experimental Design and Methodology 2014
Course TA and Guest Lecturer
Dartmouth College (Hanover, NH)

Research Methods: Laboratory in Psychological Science 2013
Course TA and Guest Lecturer
Dartmouth College (Hanover, NH)

Introduction to MATLAB for Behavioral Research 2011
Workshop organizer
Harvard University (Cambridge, MA)

Mind Perception
Workshop organizer
Harvard University (Cambridge, MA)

Awards

ICN Talk Award 2023
Innovators in Cognitive Neuroscience

Trainee Data Blitz Award
Social and Affective Neuroscience Society

Complex Systems Summer School (CSSS) 2022
Santa Fe Institute

Mistletoe Research Fellowship finalist 2021
Dartmouth College

SciPy Scholarship Award 2020
Scientific Computing with Python Conference

Poster Award
Social and Affective Neuroscience Society

Kavli Summer Institute in Cognitive Neuroscience 2019
UC Santa Barbara

Thayer Consulting Case Competition 1st Place
Thayer School of Engineering, Dartmouth College

Hack Dartmouth Finalist
Dartmouth College

Hack Dartmouth Best Community Hack 2018
Dartmouth College

Sao Paulo Summer School on Social and Affective Neuroscience (SPSAN)
Mackenzie Presbyterian University, Sao Paulo

Graduate Arts and Science Travel Award
Dartmouth College

PBS Graduate Travel Award
Dartmouth College

Neukom Institute Travel Award
Dartmouth College

Graduate Alumni Research Award 2017
Dartmouth College

PBS Graduate Travel Award
Dartmouth College

Methods in Neuroscience Computational Summer School
Dartmouth College

Summer School in Social Neuroscience and Neuroeconomics
Duke University

Trainee Data Blitz Award
Social and Affective Neuroscience Society

Human Neuroimaging Methods Travel Award
Organization for Human Brain Mapping

Hack Dartmouth 2nd Place project award 2016
Dartmouth College, Thayer School of Engineering

Neurohackweek Summer School
University of Washington eScience Institute

Social Affective Neuroscience Society Poster Award 2015
Social and Affective Neuroscience Society

PBS Graduate Travel Award
Dartmouth College

National Science Foundation Graduate Research Fellowship 2013-2016
Dartmouth College

BCS Dept: Highest Honors in research 2010
University of Rochester

Wilder-Trustee Scholarship 2006-2010
University of Rochester

Mentorship

Wasita Mahaphanit 2022-Present
Graduate Student
Dartmouth College

Sushmita Sadhukha
Graduate Student
Dartmouth College

Maxwell Ranger ’22 2021-2022
Honors Thesis
Dartmouth College

Maryam Iqbal ’21 2017-2021
Presidential Scholar/Honors Thesis
Dartmouth College

Liza Begunova ’21 2020-2021
Honors Thesis
Dartmouth College

Max Farrens ’20 2019-2020
Full-time Research Assistant
Dartmouth College

Nathan P. Greenstein ’19 2017-2019
Presidential Scholar

Dartmouth College

Sushmita Sadhukha '18
Full-time Research Assistant
Dartmouth College

Arati A. Gangadharan '18 2015-2018
Honors Thesis
Dartmouth College

Hirsh Elhence '17 2015-2017
Presidential Scholar
Dartmouth College

Technical Skills

Programming Languages
Python, Javascript, Matlab, R, Bash

Frontend Web Development
HTML, CSS, Svelte, Vue

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
Cerebral Cortex, Neuroimage, Human Brain Mapping, SCAN, Neuropsychologia, Cognition and Emotion, JESP, PLoS One, GigaScience, JOSS, Nature Communications, SIGCHI, Frontiers in Psych, JPSP, JEP:G, Journal of Neuroscience, Scientific Reports

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

Leadership & Community

Committee Member 2019-2022
Inclusivity, Diversity, and Culture Advisory Committee
Dartmouth College, Hanover, NH

Board Member 2020-2021
Dartmouth College Postdoctoral Association
Dartmouth College, Hanover NH

VP of Client Outreach 2018-2020
Dartmouth Graduate Consulting Group
Dartmouth College, Hanover, NH

Co-Founder 2017-2020
Line@ Project
Dartmouth College, Hanover, NH

Organizing committee member 2017
Dartmouth Brainhack, Hanover, NH

Station Leader 2014
GWISE Science day for local middle schools
Dartmouth College, Hanover, NH

Primary Organizer 2013-2015
Social Brain Sciences Symposium talk series
Dartmouth College, Hanover, NH

Graduate Representative
Social Area Graduate Student Representative
Dartmouth College, Hanover, NH

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Last updated: August 2023