JIN HYUN CHEONG

PhD candidate in Cognitive Neuroscience   jin.hyun.cheong.gr@dartmouth.edu
Dartmouth College   http://jinhyuncheong.com

Education

Dartmouth College, Hanover NH   2015 - present
PhD candidate in Cognitive Neuroscience
Advisor: Luke Chang

Princeton Neuroscience Institute, Princeton NJ   2013 - 2015
Lab Manager at Botvinick Lab
Advisor: Matthew Botvinick

Princeton University, Princeton NJ   2007 - 2013
A.B. with Honors in Psychology
Certificate in Neuroscience with Honors
Certificate in Finance
Advisors: Matthew Botvinick, Daniel Osherson

Research Training

Kavli Summer Institute in Cognitive Neuroscience, UC Santa Barbara CA	summer 2019
Neurohackademy, University of Washington, Seattle WA	summer 2018
Methods in Neuroscience at Dartmouth, Dartmouth College, Hanover NH	summer 2017
NIH Multimodal Neuroimaging Training Program, University of Pittsburgh PA	summer 2017

Awards

First Place, Thayer Consulting Case Competition, sponsored by Google & McKinsey & Co.	2019
SANS Best Poster Award, Social and Affective Neuroscience Society, Miami, FL	2019
Best Thematic Flash Talk Award, Society for Affective Science, Los Angeles, CA	2018
Best Dartmouth Community Hack, Hackathon, Dartmouth College	2018
NEUKOM Institute Computational Research Travel Grant, Dartmouth College	2018
NIH NIDCR Travel Award, 2017 APS Annual Convention, Boston, MA	2017
NIH Multimodal Neuroimaging Training Program Travel Award, University of Pittsburgh, PA	2017
Best Poster Award, Dartmouth Graduate Poster Session	2017
SANS Best Poster Award, Social and Affective Neuroscience Society, Los Angeles, CA	2017
Second Best Hack, Hackathon, Dartmouth College	2016
Dartmouth Entrepreneurial Network Innovation Prize, Hackathon, Dartmouth College	2016
Presidential Fellow Award, Dartmouth College	2015
Samsung Scholarship, Full college tuition Scholarship, Seoul Korea	2007

Funding

Class of '05 Crowdfunding Support Grant, Magnuson Center for Entrepreneurship, Dartmouth College	2019
Graduate Alumni Research Award, Dartmouth College.	2019

Publications

Chen, P.H.A., Jolly, E., **Cheong, J.H.,** & Chang, L.J. (Under Revision) Inter-subject representation similarity analysis reveals individual variations in affective experience when watching erotic movies. [Preprint]

Chang, L.J., Jolly, E., **Cheong, J.H.,** Chen, P.H.A, Rapuano, K., & Manning, J.R. (Under Revision at Science Advances). Endogenous variation in ventromedial prefrontal cortex state dynamics reflects affective experience in naturalistic viewing. [Preprint]

Chen, P.H.A., **Cheong, J.H.,** Jolly, E., Elhence, H., Wager, T.D., & Chang, L.J. (Under Revision at Nature Human Behavior). Socially transmitted placebo effects.

Cheong, J.H., Brooks, S., and Chang, L.J. (2019). FaceSync: Open source framework for recording facial expressions with head-mounted cameras. *F1000 Research*, 8. [Link][Preprint]

Momennejad, I., Russek, E.M., **Cheong, J.H.,** Botvinick, M.M., Daw, N. and Gershman, S.J. (2017). The successor representation in human reinforcement learning: evidence from retrospective revaluation. Nature Human Behaviour, 1. [Link] [Preprint]

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. [Link]

Oud, B., Krajbich, I., Miller, K., **Cheong, J. H.,** Botvinick, M., & Fehr, E. (2016). Irrational time allocation in decision-making. In *Proc. R. Soc. B*(Vol. 283, No. 1822, p. 20151439). The Royal Society. [Link]

Working Papers

Cheong, J.H., Molani, Z., Sadhukha, S., & Chang, L.J. (in prep). Temporal and spatial synchrony of emotions in shared experiences increase social connection.

Cheong, J.H., Byrne, S., & Chang, L.J. (in prep). FEAT: Facial expression analysis toolbox.

Cheong, J.H., Arnold, A., Chang, L.J., & Winkielman, P. (in prep). Comparison of facial EMG measures and automatically extracted action units from face videos in distinguishing affective states.

Cheong, J.H., Losin, E.R., Wager, T.D., and Chang, L.J. (in prep). Temporal dynamics in biomarkers of doctor empathy modulates patient pain responses in simulated clinical interactions.

Cheong, J.H., Jolly, E., and Chang, L.J. (in prep). Intersubject Representational Similarity Analysis (IS-RSA) identifies brain regions that represents individual variances in behavior, cognition, and traits.

Diuk, C.*, Yee, D.*, **Cheong, J.H.***, Weinstein, A., Stachenfeld, K., Schapiro, A., Barto, A., Niv, Y., and Botvinick, M.M. (in prep). A warped map of problem space in human hippocampus.
*equal contributions.

Posters & Presentations

Cheong, J.H., Chen, P.H., Jolly, E., Elhence, H., Wager, T., and Chang, L.J. (April, 2019). Socially transmitted placebo effects. Poster presented at the *2019 Society for Affective Science Annual Conference,* Boston, MA.

Cheong, J.H., Sadhukha, S., Molani, Z., and Chang, L.J. (May, 2018). Convergence of opinions and emotions in shared experiences. Poster presented at the *2018 Annual Meeting of the Social and Affective Neuroscience Society,* Brooklyn, NY.

Cheong, J.H., Sadhukha, S., Molani, Z., and Chang, L.J. (April, 2018). Convergence of opinions and emotions in shared experiences. Flash-Talk presented at the *2018 Society for Affective Science Annual Conference,* Los Angeles, CA. **Best Thematic Flash Talk Award*

Cheong, J.H., Losin, E., Wager, T., and Chang, L.J. (May, 2017). Temporal Dynamics in Biomarkers of Doctor Empathy Modulates Patient Pain Responses in Simulated Clinical Interactions*. Poster presented at the *2017 29th Association for Psychological Science Annual Convention,* Boston, MA. **NIDCR/NIH Building Bridges Travel Award*

Cheong, J.H., Jolly, E., and Chang, L.J. (April, 2017). Inferring social impressions from facial expressions*. Poster presented at the *2017 Dartmouth Graduate Poster Session,* Hanover, NH. **Best Poster Award*

Cheong, J.H., Jolly, E., and Chang, L.J. (March, 2017). A window into the mind: A computational approach to measuring emotions in response to naturalistic stimuli*. Poster presented at the *2017 Social and Affective Neuroscience Society,* Los Angeles, CA. **SANS Best Poster Award*

Jolly, E., **Cheong, J.H.** & Chang, L.J. (March, 2017). Spontaneous impression-formation about parasocial relationships. Presentation at the *Annual Meeting of the Social and Affective Neuroscience Society,* Los Angeles, CA.

Brooks, H., **Cheong, J.H.**, Cohen, J.D., and Chang, L.J. (November, 2016). Using patterns of functional brain connectivity to classify autism spectrum disorder. Poster presented at the *2016 Annual Biomedical Research Conference for Minority Students*, Tampa, FL.

Cheong, J.H., Jolly, E., and Chang, L.J. (June, 2016). Psychophysiological intersubject synchrony to naturalistic stimuli. Poster presented at the *2016 Samsung Scholarship Academic Camp*, Muju, Korea.

Momennejad, I., **Cheong, J.H.**, Botvinick, M.M., and Gershman, S.J. (June, 2015). The successor representation in human reinforcement learning: evidence from retrospective revaluation. Poster

presented at the *2nd Multidisciplinary Conference on Reinforcement Learning and Decision Making*, Edmonton, Canada.

Botvinick, M.M., Diuk, C., Yee, D., **Cheong, J.H.**, Weinstein, A., Schapiro, A., Niv Y., and Barto, A. (Nov, 2014). A hierarchical representation of problem space in human hippocampus. Poster presented at the *44th Annual Society for Neuroscience Meeting*, Washington, DC.

Oud, B., Krajbich, I., Miller, K., **Cheong, J.H.**, Botvinick, M.M., and Fehr, E. (June, 2014). Irrational Time Allocation in Decision Making. Poster presented at *2014 Samsung Scholarship Academic Camp*, Yosemite, CA.

Cheong, J.H. (June, 2014). Importance of Self-control and Ways to Enhance It. Talk at *Samsung Scholarship Academic Camp*, Yosemite, CA.

Cheong, J.H. and Osherson, D. (June, 2013). Effects of Involvement and Timing on Illusion of Control's Mediation of Loss Aversion. Poster presented at *2013 Samsung Scholarship Academic Camp*, Muju, Korea.

Cheong, J.H. (June, 2013). Psychology of Face Perception. Talk at *2013 Samsung Scholarship Academic Camp*, Muju, Korea.

Software Development

py-pat. A Python toolbox for preprocessing, visualizing, and analyzing pose data
https://github.com/jcheong0428/py-pat

feat. A Python toolbox for preprocessing, visualizing, and analyzing facial expression data
https://github.com/cosanlab/feat

facesync. A Python toolbox for synchronizing videos based on audio features.
https://github.com/cosanlab/facesync

nltools. A Python toolbox for analyzing neuroimaging data.
https://github.com/cosanlab/nltools

Emotion detector. Web application to extract emotions from face images using the Affectiva JavaScript API.
http://jinhyuncheong.com/affectiva-app/affectiva_emotion_detector_photo.html

pyMedoc. A Python class to remotely communicate with the Medoc Pathway Pain & Sensory Evaluation system.
https://github.com/cosanlab/pymedoc

LineAtKAF. iOS & web application that provide real time estimation of wait times using neural network models.
http://lineatkaf.com/

PaperWiki. A Wikipedia-like platform for collaborative discussion and summary of scientific articles.
http://www.paperwiki.org

Teaching Experience

Methods in Neuroscience at Dartmouth College, T.A., Dartmouth College	Summer 2019
Social Psychology, T.A., Dartmouth College	Winter 2018
Principles of Human Brain Mapping with fMRI, T.A., Dartmouth College	Fall 2017
Advanced Statistics Workshop, T.A., Dartmouth Summer Seminar for Composition Research	Summer 2017
Experimental Study of Social Behavior, T.A., Dartmouth College	Winter 2017
Experimental Study of Social Behavior, T.A., Dartmouth College	Spring 2016

Services & Activities

Magnuson Center for Entrepreneurship, Student Leadership Board — 2019

Dartmouth Graduate Consulting Group, pro-bono consultant for local businesses — 2019
   - Web presence optimization for local restaurant leading to 5% increase in visitors and 12% increase in duration

Towards Data Science, Medium, contributing writer — 2018~
   - Maximizing group happiness using the Hungarian optimal assignment algorithm
   - Four ways to quantify synchrony between time series data
   - Why models with significant variables can be useless predictors
   - Chance is not enough: Evaluating model significance with permutations

fMRI Brown Bag Meeting, organizer, Dartmouth College — 2018

Dartmouth Social Labs Meeting, organizer, Dartmouth College — 2017

Departmental Graduate Student Representative, Dartmouth College — 2016 - 2018

Graduate Research Roundtable, organizer, Dartmouth College — 2016 - 2017

Technical Skills

Software: Python, Full Stack Web Development, R, MATLAB.
Certification for fMRI scanners (Dartmouth College, Princeton University)