Sangil “Arthur” Lee

Postdoctoral Researcher
University of California, Berkeley
arthurlee@berkeley.edu

Education & Training

2021-current	Postdoctoral researcher, *University of California, Berkeley*
2020	Joint Ph.D. in Psychology and Marketing, *University of Pennsylvania*
2019	M.A. in Statistics, *University of Pennsylvania*
2015	M.A. in Psychology, *University of Pennsylvania*
2013-2014	Research Assistant, *University of Pennsylvania*
2013	A.B. in Psychology, summa cum laude, *Washington University in St. Louis*

Teaching & Mentoring

2021-current	Mentor for undergraduate independent research
2022	In-Lab fMRI analysis Workshop
2020	STAMP mentor for undergraduate. (Step-Ahead Mentorship Program)
2020	Instructor for *Data Analysis III. Adv. Topics* @ Drexel University Course Rating 4.9/5.0. Instructor Rating 4.8/5.0.
2016-2019	Teaching Assistant & Guest Lecturer @ University of Pennsylvania

	Introduction to Experimental Psychology, Behavioral Economics
2016	In-Lab Statistics Workshop (2 days)
2016	Guest Lecturer in Penn Laboratory Experience in Natural Science (LENS) program
2015-2016	Mentor for undergraduate independent research

Awards

2022	Pilot Grant ($20k) from CEDA (Center on the Economics and Demography of Aging) Parent Grant: P30AG012839 Center on the Economics and Demography of Aging with Ming Hsu and Andrew Kayser
2018	University of Pennsylvania's Teaching Certificate in College and University Teaching
2017	U. Penn's nominee for the 2017 Google Ph.D. Fellowship in computational neuroscience
2017	Wharton's George James Term Fund
2017	University of Pennsylvania's President Gutmann Leadership Award

Review Experiences

Journal of Experimental Psych (co-review with mentor)
Management Science (co-review with mentor)
Nature Human Behaviour
Plos One
Scientific Reports
Social Cognitive and Affective Neuroscience (SCAN)
Review Editor at Frontiers in Psychiatry

Invited Talks

2023	Beyond Prediction: Constructing, Using, and Improving Neural Predictors for Psychological Science *Stanford University, Psychology Affective Seminar*
2023	When lie-detectors go overboard: preventing the neural predictor of deception from predicting honest selfishness *The Consumer Neuroscience Symposium, Vancouver, Canada*
2021	Challenges in fMRI-based Lie Detection: Heterogeneous Neural Correlates *Annual Interdisciplinary Symposium on Decision Neuroscience, Online*
2020	fMRI: Correlation, Inference, and Prediction *Villanova University, Capstone Experience Class in Cognitive & Behavioral Neuroscience*
2020	fMRI: Correlation, Inference, and Prediction *Rutgers University – Camden, Readings in Psychology, Psychology Department*

2019 Neural Currency: Brain Decoder of Value
McGill University, Desautels Faculty of Management

2019 Neural Currency: Brain Decoder of Value
Columbia Business School, Marketing Division

2018 Neural Evidence that Delayed Rewards Are Less Concrete
The Consumer Neuroscience Symposium, Philadelphia, U.S.A.

2018 Uncovering Neural Currency through Whole-brain Choice Predictors
Sungkyunkwan University, Institute for Basic Science, Center for Neuroscience Imaging Research

2017 Domain General Neural Map of Value Predicts Choices Across Subjects and Across Tasks
The Consumer Neuroscience Symposium, Toronto, Canada

2017 Neural Currency
Korea University, Laboratory of Social Decision Neuroscience

2017 Microstructures in Discount Functions
Washington University in St. Louis, Behavioral Economics Lab

Publications

In Prep Altering Subjective Time-perception, as Measured by Neural Activity, Causes Change in Delay Discounting Impulsivity
Lee, S., Jung, W. H., & Kable, J. W.

In Prep When Lie-detectors Go Overboard: Preventing the Neural Predictor of Deception from Predicting Honest Selfishness
Lee, S., Niu, R., Zhu, L., Kayser, A., & Hsu, M.

2023 *Communications Biology*
Dynamic Expectations: Behavioral and Electrophysiological Evidence of Sub-second Updates in Reward Predictions
Marciano, D., Bellier, L., Mayer, I., Ruvalcaba, M., **Lee, S.**, Hsu, M., & Knight, R. T.

2023 *Journal of Neuroscience*
An fMRI-based Brain Marker of Individual Differences in Delay Discounting
Koban, L., **Lee, S.**, Schelski, D.S., Simon, M., Lerman, C., Weber, B., Kable, J.W., & Plassmann, H.

2022 *Proceedings of the National Academy of Sciences*
A Neural Signature of the Vividness of Prospective Thought Is Modulated by Temporal Proximity during Intertemporal Decision-Making
Lee, S., Parthasarathi, T., Cooper, N., Zauberman, G., Lerman, C., & Kable, J. W.

2022 *Neuroimage: Clinical*
Decision Value Signals in the Ventromedial Prefrontal Cortex and Motivational and Hedonic Symptoms Across Mood and Psychotic Disorders
Kang, M. S., Wolf, D. H., Kazinka, R., **Lee, S.**, Ruparel, K., Elliott, M., Xu, A., Cieslak, M., Prettyman, G., Satterthwaite, T. D., Kable, J. W.

2022 *Current Psychology*
The Involvement of the Posterior Parietal Cortex in Promotion and Prevention Focus
Han, H. J., **Lee, S.**, & Jung, W. H.

2022 *Cell Reports Methods*

Fast Construction of Interpretable Whole-brain Decoders

Lee, S., Bradlow, E. T., & Kable, J. W.

R Package @ CRAN: https://CRAN.R-project.org/package=TPLSr

MATLAB Package @ GITHUB: https://github.com/sangillee/TPLSm

Python Package @ PyPI: https://pypi.org/project/TPLSp/

2021 *Journal of Neuroscience*

Dynamic Representation of the Subjective Value of Information

Kobayashi, K., **Lee, S.**, Filipowicz, A. L. S., McGaughey, K. D., Kable, J. W., & Nassar, M. R.

2021 *Neuroimage*

Subjective value, not a grid-like code, describes neural activity in ventromedial prefrontal cortex during value-based decision-making

Lee, S., Yu, L. Q., Lerman, C., & Kable, J. W.

2021 *Journal of Neuroscience*

The dorsal and ventral default mode networks are uniquely modulated by the valence and vividness of imagined events

Lee, S., Parthasarathi, T., & Kable, J. W.

2020 *eLife*

Neural Encoding of Task-Dependent Errors During Adaptive Learning

Kao, C. H., **Lee, S.**, Gold, J. I., & Kable, J. W.

2020 *Psychometrika*

Flexible Agnostic Utility Models with Cubic Bezier Splines

Lee, S., Glaze, C. M., Bradlow, E., & Kable, J. W.

R Package @ CRAN: https://cran.r-project.org/web/packages/CBSr

MATLAB Package @ GITHUB: https://github.com/sangillee/CBSm

2020 *Frontiers in Human Neuroscience*

The Effectiveness of Online Messages for Promoting Smoking Cessation Resources: Predicting Nationwide Campaign Effects from Neural Responses in the EX Campaign

Schmaelzle, R., Cooper, N., O'Donnel, M., Tompson, S., **Lee, S.**, Cantrell, J., Vettel, J., Falk, E.

2020 *Nature*

Variability in the analysis of a single neuroimaging dataset by many groups

Botvinik-Nezer R., ..., **Lee, S.**, ..., Schonberg, T.

2020 *Scientific Reports*

Multiple Facets of Value Based Decision Making in Major Depressive Disorder

Mukherjee, D., **Lee, S.**, Kazinka, R., Sattherwaite, T. D., & Kable, J. W.

2020 *Decision*

Human as Delta-rule Learner

Lee, S., Gold, J.I., & Kable, J. W.

2018 *Plos One*

Simple but Robust Improvement in Multivoxel Pattern Classification

Lee, S., & Kable, J. W.

2018 *Neuron*

Amygdala Functional and Structural Connectivity Predicts Individual Risk Tolerance

Jung, W. H., **Lee, S.**, Lerman, C., & Kable, J. W.

2017 *Psychiatry Research*
Steeper discounting of delayed rewards in schizophrenia but not first-degree relatives
Yu, L. Q., **Lee, S.**, Katchmar, N., Satterthwaite, T. D., Kable, J. W., & Wolf, D. H.

2011 *Biochemical and biophysical research communications*
Insulin-like growth factor-binding protein-5 (IGFBP-5) inhibits TNF-α-induced NF-κB activity by binding to TNFR1
Hwang, J. R., Huh, J. H., Lee, Y., **Lee, S.**, Rho, S. B., & Lee, J. H.

2009 *Korean Journal of Legal Medicine*
Fatal factors related to abuse of propofol (Diprivan) a case report and review of the literature
Lee, S., & Yoo, S. H.