Stanford



Brian Knutson

Professor of Psychology

Bio

BIO

My lab and I seek to elucidate the neural basis of emotion (affective neuroscience), and explore implications for decision-making (neuroeconomics) and psychopathology (neurophenomics).

ACADEMIC APPOINTMENTS

- Professor, Psychology
- Member, Bio-X
- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)
- Member, Wu Tsai Human Performance Alliance
- Affiliate, Stanford Woods Institute for the Environment
- Member, Wu Tsai Neurosciences Institute

PROGRAM AFFILIATIONS

- Symbolic Systems Program

PROFESSIONAL EDUCATION

- Ph.D., Stanford University , Psychology (1993)

LINKS

- spanlab: http://stanford.edu/group/spanlab/index.html

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My primary interest is in the neural basis of emotion. I believe that a certain class of neurotransmitters (the biogenic amines) can powerfully modulate emotional experience at specific brain locations. I have addressed this topic with progressively more intricate methods including self-report, measurement of nonverbal behavior, comparative ethology, psychopharmacology, and functional brain imaging. My long-term goal is to understand the neurochemical and neuroanatomical mechanisms responsible for emotional experience and to explore the implications of these findings for the assessment and treatment of clinical disorders of affect and addiction, as well as economic behavior.

Teaching

COURSES

2026-27

- Graduate Seminar in Affective Science: PSYCH 269 (Aut, Win, Spr)

2025-26

- Affective Neuroscience: PSYCH 257 (Spr)
- Brain and Decision Making: PSYCH 134 (Spr)
- Graduate Seminar in Affective Science: PSYCH 269 (Aut, Win, Spr)
- Judgment and Decision-Making: PSYCH 154 (Win)

2024-25

- Affective Neuroscience: PSYCH 257 (Spr)
- Brain and Decision Making: PSYCH 134, PSYCH 232 (Spr)
- Graduate Seminar in Affective Science: PSYCH 269 (Aut, Win, Spr)
- Judgment and Decision-Making: PSYCH 154 (Win)

2023-24

- Brain and Decision Making: PSYCH 134, PSYCH 232 (Spr)
- Graduate Seminar in Affective Science: PSYCH 269 (Aut, Win, Spr)
- Judgment and Decision-Making: PSYCH 154 (Win)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Leili Mortazavi

Doctoral Dissertation Advisor (AC)

Xinzhe Wu, Ryan Yan

Doctoral (Program)

Ryan Yan

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Neurosciences (PhD Program)

Publications

PUBLICATIONS

- **Pupil size dynamics predict momentary changes in self-reported arousal.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
  Yan ##, R. Y., Srirangarajan, T., Bailenson, J. N., Knutson, B.
  2026
- **A STEP TOWARDS PRECISION STIMULATION: EVALUATING ALCOHOL-RELATED ATROPHY, AGE, AND SEX IN TRANSCRANIAL MAGNETIC STIMULATION DOSAGE FOR ALCOHOL USE DISORDER**
  Li, S., Knutson, B., Padula, C., McCalley, D.
  WILEY.2026: 35-36

- **Contributions of the basolateral amygdala and nucleus accumbens to sustaining not just initiating cognitive effort.** *Proceedings of the National Academy of Sciences of the United States of America*
  Dixon, M. L., Blevins, E., Dweck, C. S., Görgen, K., Knutson, B.
  2026; 123 (19): e2601231123
- **Convergent and selective representations of pain, appetitive processes, aversive processes, and cognitive control in the insula** *NATURE COMMUNICATIONS*
  Kwon, M., Bo, K., Botvinik-Nezer, R., Kragel, P. A., Van Oudenhove, L., Wager, T. D., Affective Neuroimaging Consortium
  2026; 17 (1)
- **Brain activity reveals how wildlife imagery evokes engagement on social media.** *PNAS nexus*
  Srirangarajan, T., Sawe, N., Thys, T., Wu, X. C., Knutson, B.
  2026; 5 (2): pgag012
- **STRATIFYING MDMA RESPONSE USING NEGATIVE AFFECT CIRCUIT BIOTYPES WITH CLINICAL VALIDATION**
  Zhang, X., Hack, L., Bertrand, C., Hilton, R., Gray, N., Boyar, L., Laudie, J., Heifets, B., Suppes, T., Van Roessel, P., Rodriguez, C. I., Deisseroth, K., Knutson, et al
  SPRINGERNATURE.2026
- **Females have shorter scalp-to-cortex distances and receive stronger TMS electrical fields: Implications for clinical treatment.** *Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology*
  McCalley, D. M., Cadicamo, N. J., Weijerman, F., Tenekedjieva, L. T., Knutson, B., Padula, C. B.
  2025
- **Brain activity explains message effectiveness: A mega-analysis of 16 neuroimaging studies.** *PNAS nexus*
  Scholz, C., Chan, H. Y., Ahn, J., Boksem, M. A., Cooper, N., Coronel, J. C., Doré, B. P., Genevsky, A., Huskey, R., Kang, Y., Knutson, B., Lieberman, M. D., Brook O'Donnell, et al
  2025; 4 (11): pgaf287
- **The impact of affective congruence on charitable giving.** *Social cognitive and affective neuroscience*
  Genevsky, A., Yoon, C., Lin, T. Y., Shaw, S. D., Knutson, B.
  2025
- **How we stumbled upon the rat play vocalizations: A recollection.** *Behavioural brain research*
  Knutson, B.
  2025: 115773
- **Deconstructing neural predictors of risky choice.** *PNAS nexus*
  Mortazavi, L., Wu, C. C., Ghasemi, E., Knutson, B.
  2025; 4 (7): pgaf204
- **Negative Affect Circuit Subtypes and Neural, Behavioral, and Affective Responses to MDMA: A Randomized Clinical Trial.** *JAMA network open*
  Zhang, X., Hack, L. M., Bertrand, C., Hilton, R., Gray, N. J., Boyar, L., Laudie, J., Heifets, B. D., Suppes, T., van Roessel, P. J., Rodriguez, C. I., Deisseroth, K., Knutson, et al
  2025; 8 (4): e257803
- **Neuroforecasting reveals generalizable components of choice.** *PNAS nexus*
  Genevsky, A., Tong, L. C., Knutson, B.
  2025; 4 (2): pgaf029
- **Mapping the cellular etiology of schizophrenia and complex brain phenotypes.** *Nature neuroscience*
  Duncan, L. E., Li, T., Salem, M., Li, W., Mortazavi, L., Senturk, H., Shahverdizadeh, N., Vesuna, S., Shen, H., Yoon, J., Wang, G., Ballon, J., Tan, et al
  2025
- **Effects of intermittent theta burst to the left dorsolateral prefrontal cortex on brain volumes and neurometabolites in people with alcohol use disorder: a preliminary investigation.** *Frontiers in human neuroscience*
  Durazzo, T. C., Beauregard, L. H., Gu, M., Kraybill, E. P., Joseff, B. D., Herrold, A. A., Humphreys, K., McNerney, M. W., Knutson, B., Padula, C. B.
  2025; 19: 1613993

- **Cultural Variation in the Smiles We Trust: The Effects of Reputation and Ideal Affect on Resource Sharing** *EMOTION*
  Cachia, J. Y. A., Blevins, E., Chen, Y., Ko, M., Yen, N., Knutson, B., Tsai, J. L.
  2024
- **Cultural variation in the smiles we trust: The effects of reputation and ideal affect on resource sharing.** *Emotion (Washington, D.C.)*
  Cachia, J. Y., Blevins, E., Chen, Y. C., Ko, M., Yen, N. S., Knutson, B., Tsai, J. L.
  2024
- **Two Faces of Reward: Alcohol-Cue and Monetary Assessment of Reward Circuit Functioning Reveals Neural Predictors of Relapse in Alcohol Use Disorder**
  Padula, C., MacNiven, K., Tenekedjieva, L., McCalley, D., Knutson, B., Williams, L.
  SPRINGERNATURE.2024: 217-218
- **BRAIN-WIDE, GENOME-WIDE ANALYSES IDENTIFY CELL TYPES FOR COMPLEX BRAIN PHENOTYPES INCLUDING SCHIZOPHRENIA, PTSD, DEPRESSION, HOT FLASHES, MULTIPLE SCLEROSIS, AND ALZHEIMER'S DISEASE**
  Duncan, L., Li, T., Salem, M., Li, W., Mortazavi, L., Shargh, N., Senturk, H., Vesuna, S., Yoon, J., Wang, G., Ballon, J., Tan, L., Pruett, et al
  SPRINGERNATURE.2024: 326
- **Structural projections to the nucleus accumbens link to impulsive components of human risk preference.** *Imaging neuroscience (Cambridge, Mass.)*
  Tisdall, L., MacNiven, K., Leong, J., Frey, R., Rieskamp, J., Hertwig, R., Knutson, B., Mata, R.
  2024; 2
- **News source bias and sentiment on social media.** *PloS one*
  Knutson, B., Hsu, T. W., Ko, M., Tsai, J. L.
  2024; 19 (10): e0305148
- **Multi-dimensional predictors of first drinking initiation and regular drinking onset in adolescence: A prospective longitudinal study.** *Developmental cognitive neuroscience*
  Nguyen-Louie, T. T., Thompson, W. K., Sullivan, E. V., Pfefferbaum, A., Gonzalez, C., Eberson-Shumate, S. C., Wade, N. E., Clark, D. B., Nagel, B. J., Baker, F. C., Luna, B., Nooner, K. B., de Zambotti, et al
  2024; 69: 101424
- **A pilot, randomized clinical trial: Left dorsolateral prefrontal cortex intermittent theta burst stimulation improves treatment outcomes in veterans with alcohol use disorder.** *Alcohol, clinical & experimental research*
  Padula, C. B., McCalley, D. M., Tenekedjieva, L., MacNiven, K., Rauch, A., Morales, J. M., Knutson, B., Humphreys, K., Williams, L. M., Durazzo, T. C.
  2024; 48 (1): 164-177
- **Commentaries on "Reconsidering the path for neural and physiological methods in consumer psychology"** *JOURNAL OF CONSUMER PSYCHOLOGY*
  Hutchinson, J., Reimann, M., Knutson, B., Huber, J.
  2023
- **Left Dorsolateral Prefrontal Cortex Intermittent Theta Burst Stimulation Improves Treatment Outcomes in Veterans With Alcohol Use Disorder: A Randomized, Sham-Controlled Clinical Pilot Trial**
  McCalley, D., Tenekedjieva, L., MacNiven, K., Rauch, A., Morales, J., Knutson, B., Humphreys, K., Williams, L., Durazzo, T., Padula, C.
  SPRINGERNATURE.2023: 449
- **Leveraging neuroscience for climate change research** *NATURE CLIMATE CHANGE*
  Doell, K. C., Berman, M. G., Bratman, G. N., Knutson, B., Kuhn, S., Lamm, C., Pahl, S., Sawe, N., Van Bavel, J. J., White, M. P., Brosch, T.
  2023
- **Cultural variation in neural responses to social but not monetary reward outcomes.** *Social cognitive and affective neuroscience*
  Blevins, E., Ko, M., Park, B., Qu, Y., Knutson, B., Tsai, J. L.
  2023
- **Ketamine's acute effects on negative brain states are mediated through distinct altered states of consciousness in humans.** *Nature communications*
  Hack, L. M., Zhang, X., Heifets, B. D., Suppes, T., van Roessel, P. J., Yesavage, J. A., Gray, N. J., Hilton, R., Bertrand, C., Rodriguez, C. I., Deisseroth, K., Knutson, B., Williams, et al

2023; 14 (1): 6631

- **Blunted Neurobehavioral Loss Anticipation Predicts Relapse to Stimulant Drug Use** *Biological Psychiatry*
  Mortazavi*, L., MacNiven*, K. H., Knutson, B.
  2023
- **Blunted neurobehavioral loss anticipation predicts relapse to stimulant drug use.** *Biological psychiatry*
  MacNiven, K. H., Mortazavi, L., Knutson, B.
  2023
- **Acute Effects of MDMA on Intrinsic Functional Connectomes Associated With Altered States of Consciousness and Defensiveness**
  Zhang, X., Hack, L., Heifets, B., Suppes, T., van Roessel, P., Yesavage, J., Gray, N., Hilton, R., Rodriguez, C., Deisseroth, K., Knutson, B., Williams, L.
  ELSEVIER SCIENCE INC.2023: S87-S88
- **Ketamine's Acute Effects on Negative Brain States are Mediated Through Distinct Altered States in Humans**
  Zhang, X., Hack, L., Heifets, B., Suppes, T., Van Roessel, P., Yesavage, J., Gray, N., Hilton, R., Rodriguez, C., Deisseroth, K., Knutson, B., Williams, L.
  ELSEVIER SCIENCE INC.2023: S312
- **Acute Effects of MDMA on Negative Affective Brain Circuit Function: A Randomized Controlled Mechanistic Trial**
  Hack, L., Zhang, X., Heifets, B., Suppes, T., van Roessel, P., Yesavage, J., Gray, N., Hilton, R., Rodriguez, C., Deisseroth, K., Knutson, B., Williams, L.
  ELSEVIER SCIENCE INC.2023: S88
- **Replication of neural responses to monetary incentives and exploration of reward-influenced network connectivity in fibromyalgia.** *Neuroimage. Reports*
  Park, S. H., Deng, E. Z., Baker, A. K., MacNiven, K. H., Knutson, B., Martucci, K. T.
  2022; 2 (4)
- **Disentangling the Skeins of Brain.** *Journal of cognitive neuroscience*
  Knutson, B., Srirangarajan, T.
  2022: 1-5
- **Neural responses clarify how ecolabels promote sustainable purchases.** *NeuroImage*
  Sawe, N., Srirangarajan, T., Sahoo, A., Tang, G. S., Knutson, B.
  2022: 119668
- **Brain tract structure predicts relapse to stimulant drug use.** *Proceedings of the National Academy of Sciences of the United States of America*
  Tisdall, L., MacNiven, K. H., Padula, C. B., Leong, J. K., Knutson, B.
  2022; 119 (26): e2116703119
- **Deconstructing Ketamine-Induced Changes in Cortisol and Dissociative and Affective States in a Controlled Mechanistic Study**
  Hack, L. M., Zhang, X., Brawer, J., Gray, N., Heifets, B., Suppes, T., van Roessel, P., Rodriguez, C., Knutson, B., Williams, L.
  ELSEVIER SCIENCE INC.2022: S178-S179
- **Acute Ketamine Modulates Cognitive Control Network Activity During Cognitive Inhibition: Evidence From a Mechanistic Trial**
  Zhang, X., Hack, L., Brawer, J., Gray, N., Heifets, B., Suppes, T., van Roessel, P., Rodriguez, C., Knutson, B., Williams, L.
  ELSEVIER SCIENCE INC.2022: S225
- **Longitudinal tracking of human plasma oxytocin suggests complex responses to moral elevation.** *Comprehensive psychoneuroendocrinology*
  Parkitny, L., Carter, C. S., Peckins, M. K., Hon, D. A., Saturn, S., Nazarloo, H. P., Hurlbut, W., Knutson, B., Crane, S., Harris, X., Younger, J.
  2022; 9: 100105
- **Targeting the Salience Network: A Mini-Review on a Novel Neuromodulation Approach for Treating Alcohol Use Disorder.** *Frontiers in psychiatry*
  Padula, C. B., Tenekedjieva, L., McCalley, D. M., Al-Dasouqi, H., Hanlon, C. A., Williams, L. M., Kozel, F. A., Knutson, B., Durazzo, T. C., Yesavage, J. A., Madore, M. R.
  2022; 13: 893833

- **Taking gambles at face value: Effects of emotional expressions on risky decisions.** *Frontiers in psychology*
  Winkielman, P., Trujillo, J. L., Bornemann, B., Knutson, B., Paulus, M. P.
  2022; 13: 958918
- **Multi-band FMRI compromises detection of mesolimbic reward responses.** *NeuroImage*
  Srirangarajan, T., Mortazavi, L., Bortolini, T., Moll, J., Knutson, B.
  2021: 118617
- **Social media users produce more affect that supports cultural values, but are more influenced by affect that violates cultural values.** *Journal of personality and social psychology*
  Hsu, T. W., Niiya, Y., Thelwall, M., Ko, M., Knutson, B., Tsai, J. L.
  2021
- **Striatal and septo-hypothalamic responses to anticipation and outcome of affiliative rewards.** *NeuroImage*
  Bortolini, T., Melo, B., Basilio, R., Fischer, R., Zahn, R., de Oliveira-Souza, R., Knutson, B., Moll, J.
  2021: 118474
- **The rise of affectivism.** *Nature human behaviour*
  Dukes, D., Abrams, K., Adolphs, R., Ahmed, M. E., Beatty, A., Berridge, K. C., Broomhall, S., Brosch, T., Campos, J. J., Clay, Z., Clement, F., Cunningham, W. A., Damasio, et al
  2021
- **Brain activity foreshadows stock price dynamics.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
  Stallen, M., Borg, N., Knutson, B.
  2021
- **White-matter tract connecting anterior insula to nucleus accumbens predicts greater future motivation in adolescents.** *Developmental cognitive neuroscience*
  Leong, J. K., Ho, T. C., Colich, N. L., Sisk, L., Knutson, B., Gotlib, I. H.
  2020; 47: 100881
- **Medial forebrain bundle structure is linked to human impulsivity.** *Science advances*
  MacNiven, K. H., Leong, J. K., Knutson, B.
  2020; 6 (38)
- **Brain activity forecasts video engagement in an internet attention market.** *Proceedings of the National Academy of Sciences of the United States of America*
  Tong, L. C., Acikalin, M. Y., Genevsky, A., Shiv, B., Knutson, B.
  2020
- **Brain-Responsive Neurostimulation for Loss of Control Eating: Early Feasibility Study.** *Neurosurgery*
  Wu, H. n., Adler, S. n., Azagury, D. E., Bohon, C. n., Safer, D. L., Barbosa, D. A., Bhati, M. T., Williams, N. R., Dunn, L. B., Tass, P. A., Knutson, B. D., Yutsis, M. n., Fraser, et al
  2020
- **Culturally valued facial expressions enhance loan request success.** *Emotion (Washington, D.C.)*
  Park, B., Genevsky, A., Knutson, B., Tsai, J.
  2019
- **Apparent Effects of Opioid Use on Neural Responses to Reward in Chronic Pain.** *Scientific reports*
  Martucci, K. T., MacNiven, K. H., Borg, N. n., Knutson, B. n., Mackey, S. C.
  2019; 9 (1): 9633
- **Neural responses to monetary incentives in bipolar disorder.** *NeuroImage. Clinical*
  Johnson, S. L., Mehta, H. n., Ketter, T. A., Gotlib, I. H., Knutson, B. n.
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- **Toward a Deep Science of Affect and Motivation**
  Knutson, B., Srirangarajan, T.
  edited by Neta, M., Haas, I. J.

SPRINGER INTERNATIONAL PUBLISHING AG.2019: 193–220

- **Association of Neural Responses to Drug Cues With Subsequent Relapse to Stimulant Use.** *JAMA network open*
  MacNiven, K. H., Jensen, E. L., Borg, N., Padula, C. B., Humphreys, K., Knutson, B.
  2018; 1 (8): e186466

- **Striatal dopamine deficits predict reductions in striatal functional connectivity in major depression: a concurrent 11C-raclopride positron emission tomography and functional magnetic resonance imaging investigation.** *Translational psychiatry*
  Hamilton, J. P., Sacchet, M. D., Hjornevik, T., Chin, F. T., Shen, B., Kampe, R., Park, J. H., Knutson, B. D., Williams, L. M., Borg, N., Zaharchuk, G., Camacho, M. C., Mackey, et al
  2018; 8 (1): 264

- **Neural sensitivity to personal and vicarious reward differentially relates to prosociality and well-being** *SOCIAL COGNITIVE AND AFFECTIVE NEUROSCIENCE*
  Morelli, S. A., Knutson, B., Zaki, J.
  2018; 13 (8): 831–39

- **Distinct neural circuits support incentivized inhibition.** *NeuroImage*
  Leong, J. K., MacNiven, K. H., Samanez-Larkin, G. R., Knutson, B.
  2018; 178: 435–44

- **Altered prefrontal correlates of monetary anticipation and outcome in chronic pain.** *Pain*
  Martucci, K. T., Borg, N., MacNiven, K. H., Knutson, B., Mackey, S. C.
  2018

- **Neuroforecasting Aggregate Choice** *CURRENT DIRECTIONS IN PSYCHOLOGICAL SCIENCE*
  Knutson, B., Genevsky, A.
  2018; 27 (2): 110–15

- **Reward and loss anticipation in panic disorder: An fMRI study** *PSYCHIATRY RESEARCH-NEUROIMAGING*
  Held-Poschardt, D., Sterzer, P., Schlagenhauf, F., Pehrs, C., Wittmann, A., Stoy, M., Haegele, C., Knutson, B., Heinz, A., Stroehle, A.
  2018; 271: 111–17

- **Closing the loop on impulsivity via nucleus accumbens delta-band activity in mice and man.** *Proceedings of the National Academy of Sciences of the United States of America*
  Wu, H. n., Miller, K. J., Blumenfeld, Z. n., Williams, N. R., Ravikumar, V. K., Lee, K. E., Kakusa, B. n., Sacchet, M. D., Wintermark, M. n., Christoffel, D. J., Rutt, B. K., Bronte-Stewart, H. n., Knutson, et al
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  MacNiven, K. H., Jensen, E. L., Borg, N., Padula, C. B., Humphreys, K., Knutson, B.
  2018

- **Individual differences in skewed financial risk-taking across the adult life span** *COGNITIVE AFFECTIVE & BEHAVIORAL NEUROSCIENCE*
  Seaman, K. L., Leong, J. K., Wu, C. C., Knutson, B., Samanez-Larkin, G. R.
  2017; 17 (6): 1232–41

- **When Brain Beats Behavior: Neuroforecasting Crowdfunding Outcomes.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
  Genevsky, A., Yoon, C., Knutson, B.
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- **Neurocultural Evidence That Ideal Affect Match Promotes Giving.** *Social cognitive and affective neuroscience*
  Park, B., Blevins, E., Knutson, B., Tsai, J. L.
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  Büchel, C., Peters, J., Banaschewski, T., Bokde, A. L., Bromberg, U., Conrod, P. J., Flor, H., Papadopoulos, D., Garavan, H., Gowland, P., Heinz, A., Walter, H., Ittermann, et al
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- **Blunted ventral striatal responses to anticipated rewards foreshadow problematic drug use in novelty-seeking adolescents** *NATURE COMMUNICATIONS*
  Buechel, C., Peters, J., Banaschewski, T., Bokde, A. L., Bromberg, U., Conrod, P. J., Flor, H., Papadopoulos, D., Garavan, H., Gowland, P., Heinz, A., Walter, H., Ittermann, et al
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- **Brains, environments, and policy responses to addiction.** *Science (New York, N.Y.)*
  Humphreys, K. n., Malenka, R. C., Knutson, B. n., MacCoun, R. J.
  2017; 356 (6344): 1237–38
- **A Genetic Polymorphism of the Human Dopamine Transporter Determines the Impact of Sleep Deprivation on Brain Responses to Rewards and Punishments** *JOURNAL OF COGNITIVE NEUROSCIENCE*
  Greer, S. M., Goldstein, A. N., Knutson, B., Walker, M. P.
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- **Nucleus accumbens D2R cells signal prior outcomes and control risky decision-making.** *Nature*
  Zalocusky, K. A., Ramakrishnan, C., Lerner, T. N., Davidson, T. J., Knutson, B., Deisseroth, K.
  2016; 531 (7596): 642-646
- **Neural evidence for cultural differences in the valuation of positive facial expressions.** *Social cognitive and affective neuroscience*
  Park, B., Tsai, J. L., Chim, L., Blevins, E., Knutson, B.
  2016; 11 (2): 243-252
- **White-Matter Tract Connecting Anterior Insula to Nucleus Accumbens Correlates with Reduced Preference for Positively Skewed Gambles** *NEURON*
  Leong, J. K., Pestilli, F., Wu, C. C., Samanez-Larkin, G. R., Knutson, B.
  2016; 89 (1): 63-69
- **Prefrontal cortical regulation of brainwide circuit dynamics and reward-related behavior.** *Science*
  Ferenczi, E. A., Zalocusky, K. A., Liston, C., Grosenick, L., Warden, M. R., Amatya, D., Katovich, K., Mehta, H., Patenaude, B., Ramakrishnan, C., Kalanithi, P., Etkin, A., Knutson, et al
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- **Neural valuation of environmental resources.** *NeuroImage*
  Sawe, N., Knutson, B.
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- **Neural Affective Mechanisms Predict Market-Level Microlending.** *Psychological science*
  Genevsky, A., Knutson, B.
  2015; 26 (9): 1411-1422
- **Cost Conscious? The Neural and Behavioral Impact of Price Primacy on Decision Making** *JOURNAL OF MARKETING RESEARCH*
  Karmarkar, U. R., Shiv, B., Knutson, B.
  2015; 52 (4): 467-481
- **Decision making in the ageing brain: changes in affective and motivational circuits** *NATURE REVIEWS NEUROSCIENCE*
  Samanez-Larkin, G. R., Knutson, B.
  2015; 16 (5): 278-289
- **Probing psychiatric symptoms with the monetary incentive delay task.** *Biological psychiatry*
  Knutson, B., Heinz, A.
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- **Advancing consumer neuroscience** *MARKETING LETTERS*
  Smidts, A., Hsu, M., Sanfey, A. G., Boksem, M. A., Ebstein, R. B., Huettel, S. A., Kable, J. W., Karmarkar, U. R., Kitayama, S., Knutson, B., Liberzon, I., Lohrenz, T., Stallen, et al
  2014; 25 (3): 257-267
- **Control of nucleus accumbens activity with neurofeedback** *NEUROIMAGE*
  Greer, S. M., Trujillo, A. J., Glover, G. H., Knutson, B.

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- **Inferring affect from fMRI data** *TRENDS IN COGNITIVE SCIENCES*
  Knutson, B., Katovich, K., Suri, G.
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- **Adult age differences in frontostriatal representation of prediction error but not reward outcome** *COGNITIVE AFFECTIVE & BEHAVIORAL NEUROSCIENCE*
  Samanez-Larkin, G. R., Worthy, D. A., Mata, R., McClure, S. M., Knutson, B.
  2014; 14 (2): 672-682
- **Adult age differences in frontostriatal representation of prediction error but not reward outcome.** *Cognitive, affective & behavioral neuroscience*
  Samanez-Larkin, G. R., Worthy, D. A., Mata, R., McClure, S. M., Knutson, B.
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  Miller, E. M., Shankar, M. U., Knutson, B., McClure, S. M.
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