

Curriculum Vitae – February, 2009

## Brian Knutson

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### Current Employment

2008-present *Associate Professor*, Psychology and Neuroscience,  
Stanford University Psychology Department

### Past Employment

2001-2008 *Assistant Professor*, Psychology and Neuroscience,  
Stanford University Psychology Department

1996-2001 *Research Fellow*, National Research Council  
with Drs. Daniel Hommer and Markku Linnoila  
at the National Institute on Alcohol Abuse and Alcoholism, NIH

### Education

1993-1996 *Post-doctoral Fellow*, NIMH Training Grant in Emotion Research  
with Drs. Paul Ekman and Owen Wolkowitz at U.C. San Francisco  
and Dr. Jaak Panksepp at Bowling Green State University

1989-1993 *Ph.D.*, Stanford University, Psychology.  
Dissertation advisor: Dr. Susan Nolen-Hoeksema  
Dissertation: "Links Between Facial Expression and Interpersonal Traits"

1985-1989 *B.A.*, Trinity University, Comparative Religion  
*B.A.*, Trinity University, Psychology, magna cum laude.  
Honors Thesis advisor: Dr. Daniel Wegner  
Honors Thesis: "Effects of Distraction on Thought Suppression"

### Research Interests

Neural basis of emotional experience and expression in mammals  
Applications to economic and social decision-making  
Applications to clinical disorders of affect and addiction

### Research Grants

2008-2010 "Anticipatory affect and financial risk taking" (Principal Investigator): National  
Science Foundation, \$518,403.

- 2007-2009 "Anticipation of reward and risk across the lifespan" (Principal Investigator): National Institute of Aging R21, \$450,000.
- 2007-2010 "Neural substrates of game-induced attitude change" (Principal Investigator, with Coinvestigator Steve Cole): HopeLab Foundation Gift, \$190,000.
- 2007-2009 "Individual differences in financial decision-making across the lifespan" (Principal Investigator): FINRA Investor Education Fund Grant, \$401,514.
- 2006-2008 "Investing in the future you: Delay discounting in older and younger adults" (Principal Investigator): Stanford Roybal Center on Advancing Decision Making in Aging Seed Grant, \$40,000.
- 2006- "Choosing not to choose: Ambiguity aversion in younger and older adults" (Principal Investigator, with Co-investigator Greg Larkin): Stanford Roybal Center on Advancing Decision Making in Aging Seed Grant, \$40,000.
- 2006- "Neural and cognitive facets of reward responsivity in bipolar disorder" (Co-investigator, with Principal Investigator Sheri Johnson): National Institute of Mental Health R01, \$277,469.
- 2005- "Cultural variation in affect valuation" (Co-investigator, with Principle Investigator Jeanne Tsai): National Institute of Mental Health R01, \$369,337.
- 2005-2007 "Affective aspects of decision-making in older adults" (Principal Investigator, with Co-investigator Greg Larkin, Stanford U.): Stanford Roybal Center on Advancing Decision Making in Aging Seed Grant, \$40,000.
- 2005-2007 "Affective neuroscience probes of cigarette craving" (Principal Investigator): National Institute on Drug Abuse R03, \$234,000
- 2005-2007 "Affective forecasting across the lifespan" (Principal Investigator, with Co-investigator Lis Nielsen): Stanford Center for Demography and Economics of Health and Aging Seed Grant, \$12,500.
- 2004-2005 "fMRI of Reward Processing in Unipolar Depression" (Principal Investigator): National Alliance for Research on Schizophrenia and Depression Young Investigator Award, \$60,000.
- 2002-2005 "A Neurobehavioral Probe of Human Reward Processing" (Principal Investigator): National Institute of Mental Health R03, \$74,000.
- 2002-2005 "Visualizing the Subcortex" (Principal Investigator with Co-Investigator Jonathan Taylor): Stanford University Office of Technology Licensing Development Grant, \$30,410.
- 1994-1995 "Effects of Serotonin-Specific Reuptake Inhibitors on Personality" (Co-investigator with Principal Investigator Victor Reus): U. C. San Francisco Research Evaluation and Allocation Committee Grant, \$20,000.

## Honors and Awards

- 2003 *Young Investigator Award*, National Alliance for Research on Schizophrenia and Depression
- 2002 *Neal E. Miller New Investigator Award*, Academy of Behavioral Medicine Research
- 1998, 1999 *Affective Neuroscience Scholar Travel Awards*, HealthEmotions Institute
- 1996 *Young Investigator Award*, American Psychiatric Association
- 1996 *Young Scientist Award*, New York Academy of Sciences
- 1993-1996 *Postdoctoral Fellowship in Emotion Research*, National Institute of Mental Health
- 1993 *Dissertation Award*, American Psychological Association
- 1989-1993 *Graduate Fellowship*, National Science Foundation
- 1989-1993 *Graduate Fellowship*, Stanford University
- 1989 *Outstanding Psychology Student Award*, Trinity University
- 1989 *Phi Beta Kappa*, Trinity University
- 1986-1989 *Presidential Scholarship*, Trinity University
- 1986-1989 *National Merit Scholarship*

## Association Memberships

American Psychological Society  
 Cognitive Neuroscience Society  
 Organization for Human Brain Mapping  
 Society for Neuroeconomics (former Council Member)  
 Society for Neuroscience

## Publications

### Articles

1. Hasler, G., Luckenbaugh, D. A., Snow, J., Meyers, N., Waldeck, T., Geraci, M., Roiser, J., **Knutson, B.**, Charney, D. S., Drevets, W. C. (2009). Reward processing after catecholamine depletion in unmedicated remitted subjects with major depressive disorder. Biological Psychiatry, In Press.
2. Ballard, K., **Knutson, B.** (2009). Dissociable neural representations of future reward magnitude and delay during temporal discounting. NeuroImage, 45, 143-150.
3. Ersner-Hershfield, H., Wimmer, G. E., **Knutson, B.** (2008). Saving for the future self: Neural measures of future self-continuity predict temporal discounting. Social Cognitive and Affective Neuroscience, In Press.
4. Grosenick, L., Greer, S. M., **Knutson, B.** (2008). Interpretable classifiers for fMRI improve prediction of purchases. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 16, 539-548.
5. **Knutson, B.**, Greer S. M. (2008) Anticipatory affect: Neural correlates and consequences for choice. Philosophical Transactions of the Royal Society B, 363, 3771-3786. [cover]

6. Bjork, J. M., **Knutson, B.**, Hommer, D. W. (2008). Incentive-elicited striatal activation in adolescent children of alcoholics. Addiction, 103, 1308-1319.
7. Nielsen, L., **Knutson, B.**, Carstensen, L. L. (2008). Affect dynamics, affective forecasting, and aging. Emotion, 8, 318-330.
8. **Knutson, B.**, Wimmer, G. E., Rick, S., Hollon, N. G., Prelec, D., Loewenstein, G. (2008). Neural antecedents of the endowment effect. Neuron, 58, 814-822.
9. Samanez-Larkin, G. R., Hollon, N. G., Carstensen, L. L., **Knutson, B.** (2008). Individual differences in insular sensitivity during loss anticipation predict avoidance learning. Psychological Science, 19, 320-323.
10. **Knutson, B.**, Wimmer, G. E., Kuhnen, C. M., Winkielman P. (2008). Nucleus accumbens activation mediates the influence of reward cues on financial risk-taking, NeuroReport, 19, 509-513.
11. Schlagenhaut, F., Juckel, G., Koslowski, M., Kahnt, T., Dembler, T. **Knutson, B.**, Kienast, T., Gallinat, J., Wrase, J., Heinz, A. (2008). Increased reward system activation is associated with decreased negative symptoms in schizophrenic patients switched from typical neuroleptics to olanzapine. Psychopharmacology, 196, 673-684.
12. **Knutson, B.**, Bhanji, J., Cooney, R. E., Atlas, L., Gotlib, I. H. (2008). Neural responses to monetary incentives in major depression. Biological Psychiatry, 63, 686-692.
13. Strohle, A., Stoy, M., Wrase, J., Schwarzer, S., Schlagenhaut, F., Huss, H., Hein, J., Nedderhut, A., Neumann, B., Gregor, A., **Knutson, B.**, Lehmkuhl, U., Bauer, M., Heinz, A. (2008). Reward anticipation and outcomes in adult males with attention deficit hyperactivity disorder. NeuroImage, 39, 966-972.
14. Cooper, J. C., **Knutson, B.** (2008). Valence and salience contribute to nucleus accumbens activation. NeuroImage, 39, 538-547.
15. **Knutson, B.**, Bossaerts, P. (2007). Neural antecedents of financial decisions. Journal of Neuroscience, 27, 8174-8177.
16. Samanez-Larkin, G. R., Gibbs, S. E. B., Nielsen, L., Khanna, K., Carstensen, L., **Knutson, B.** (2007). Anticipation of monetary gain but not loss in older adults. Nature Neuroscience, 10, 787-791.
17. Wrase, J., Kahnt, T., Schlagenhaut, F., Beck, A., Cohen, M. X., **Knutson, B.**, Heinz, A. (2007). Different neural systems adjust motor behavior in response to reward and punishment. NeuroImage, 36, 1253-1262.
18. Winkielman, P., **Knutson, B.**, Paulus, M. P., Trujillo, J. L. (2007). Affective influence on decisions: Moving towards mechanisms. Review of General Psychology, 11, 179-192.
19. **Knutson, B.**, Wimmer, G. E. (2007). Splitting the difference: How does the brain code reward episodes? Annals of the New York Academy of Sciences, 1104, 54-69.

20. Wrase, J., Schlagenhauf, F., Kienast, T., Wustenberg, T., Bermpohl, F., Kahnt, T., Beck, A., Strohle, A., Juckel, G., **Knutson, B.**, Heinz, A. (2007). Dysfunction of reward processing correlates with alcohol craving in detoxified alcoholics. NeuroImage, 35, 787-794.
21. **Knutson, B.**, Gibbs, S. E. B. (2007). Linking nucleus accumbens dopamine and blood oxygenation. Psychopharmacology, 191, 813-822.
22. Scheres, A., Milham, M., **Knutson, B.**, Castellanos, F. X. (2007). Ventral striatal hyporesponsiveness during reward anticipation in Attention Deficit / Hyperactivity Disorder, Biological Psychiatry, 61, 720-724.
23. **Knutson, B.**, Rick, S., Wimmer, G. E., Prelec, D., Loewenstein, G. (2007). Neural predictors of purchases. Neuron, 53, 147-156.
24. **Knutson, B.**, Cooper, J. C. (2006). The lure of the unknown. Neuron, 51, 280-282.
25. Juckel, G., Schlagenhauf, F., Koslowski, M., Wustenberg, T., Villringer, A., **Knutson, B.**, Wrase, J., Heinz, A. (2006). Dysfunction of ventral striatal reward prediction in schizophrenic patients treated with typical but not atypical neuroleptics. Psychopharmacology, 187, 222-228.
26. Adcock, R. A., Thangavel, A., Whitfield-Gabrieli, S., **Knutson, B.**, Gabrieli, J. D. E. (2006). Reward-motivated learning: Mesolimbic activation precedes memory formation. Neuron, 50, 507-517.
27. Tsai, J. L., **Knutson, B.**, Fung, H. (2006). Cultural variation in affect valuation. Journal of Personality and Social Psychology, 90, 288-307.
28. Juckel, G., Schlagenhauf, F., Koslowski, M., Wustenberg, T., Villringer, A., **Knutson, B.**, Wrase, J., Heinz, A. (2006). Dysfunction of ventral striatal reward prediction in schizophrenia. NeuroImage, 29, 409-416.
29. Kuhnen, C. M. & **Knutson, B.** (2005). The neural basis of financial risk-taking. Neuron, 47, 763-770. [cover]
30. **Knutson, B.**, Cooper, J. C. (2005). Functional magnetic resonance imaging of reward prediction. Current Opinion in Neurology, 18, 411-417.
31. **Knutson, B.**, Peterson, R. (2005). Neurally reconstructing expected utility. Games and Economic Behavior. 52, 305-315.
32. **Knutson, B.**, Taylor, J., Kaufman, M., Peterson, R., Glover, G. (2005). Distributed neural representation of expected value. Journal of Neuroscience. 25, 4806-4812. [cover]
33. **Knutson, B.**, Adcock, R. A. (2005). Remembrance of rewards past. Neuron, 45, 331-332.
34. **Knutson, B.** (2004). Sweet revenge? Science, 305, 1246-1247.

35. **Knutson, B.**, Bjork, J. M., Fong, G. W., Hommer, D. W., Mattay, V. S., Weinberger, D. R. (2004). Amphetamine modulates human incentive processing. Neuron, 43, 261-269.
36. Momenan, R., Rawlings, R., Fong, G. W., **Knutson, B.**, Hommer, D. (2004). Voxel-based homogeneity probability maps of gray matter in groups: Assessing the reliability of functional effects. NeuroImage, 21, 801-817.
37. Bjork, J. M., **Knutson, B.**, Fong, G. W., Caggiano, D. M., Bennett, S. M., Hommer, D. (2004). Incentive-elicited brain activation in adolescents: Similarities and differences from young adults. Journal of Neuroscience, 24, 1793-1802.
38. Hommer, D. W., **Knutson, B.**, Fong, G. W., Bennett, S., Adams, C. M., Varner, J. L. (2003). Amygdalar recruitment during anticipation of monetary rewards: An event-related FMRI study. Annals of the New York Academy of Sciences, 985, 476-478.
39. **Knutson, B.**, Fong, G. W., Bennett, S. M., Adams, C. S., Hommer, D. (2003). A region of mesial prefrontal cortex tracks monetarily rewarding outcomes: Characterization with rapid event-related fMRI. NeuroImage, 18, 263-272.
40. **Knutson, B.**, Burgdorf, J., Panksepp, J. (2002). Ultrasonic vocalizations as indices of affect in rats. Psychological Bulletin, 128, 961-977.
41. Winterer, G., Adams, C. M., Jones, D. W., **Knutson, B.** (2002). Volition to action — an event-related FMRI study. NeuroImage, 17, 851-858.
42. Panksepp, J., **Knutson, B.**, Burgdorf, J. (2002). The role of emotional brain systems in addictions: A neuro-evolutionary perspective. Addiction, 97, 459-469.
43. **Knutson, B.**, Fong, G., Adams, C. M., Hommer, D. (2001). Dissociation of reward anticipation versus outcome with event-related FMRI. NeuroReport, 12, 3683-3687.
44. **Knutson, B.**, Momenan, R., Rawlings, R., Fong, G., Hommer, D (2001). Negative association of neuroticism with brain volume ratio in healthy humans. Biological Psychiatry, 50: 685-690.
45. **Knutson, B.**, Adams, C., Fong, G., Hommer, D. (2001). Anticipation of monetary reward selectively recruits nucleus accumbens. Journal of Neuroscience, 21:RC159.
46. Burgdorf, J., **Knutson, B.**, Panksepp, J. (2001). Nucleus accumbens amphetamine dose-dependently increases high-frequency ultrasonic vocalizations in rats. Behavioral Neuroscience, 115, 940-944.
47. Burgdorf, J., **Knutson, B.**, Panksepp, J, Shippenberg, T. (2001). Evaluation of rat ultrasonic vocalizations as predictors of the conditioned aversive effects of drugs. Psychopharmacology, 155, 35-42.
48. **Knutson, B.**, Westdorp, A., Kaiser, E., Hommer, D. (2000). FMRI visualization of brain activity during a monetary incentive delay task. NeuroImage, 12, 20-27.
49. Burgdorf, J., **Knutson, B.**, Panksepp, J. (2000). Anticipation of rewarding brain stimulation evokes ultrasonic vocalizations in rats. Behavioral Neuroscience, 114(2), 320-

327.

50. **Knutson, B.**, Burgdorf, J., Panksepp, J. (1999). High-frequency ultrasonic vocalizations index conditioned pharmacological reward in rats. Physiology and Behavior, 66(4), 639-643.
51. **Knutson, B.**, Wolkowitz, O. M., Cole, S. W., Chan, T., Moore, E. A., Johnson, R. C., Terpstra, J., Turner, R. S., Reus, V. I. (1998). Selective alteration of personality and social behavior by serotonergic intervention. American Journal of Psychiatry, 155, 373-379. [Reprinted in Foundations in Social Neuroscience, (pp. 1059-1070) New York: MIT Press.]
52. **Knutson, B.**, Burgdorf, J., Panksepp, J. (1998). Anticipation of play elicits high-frequency ultrasonic vocalizations in young rats. Journal of Comparative Psychology, 112, 65-73.
53. **Knutson, B.**, Cole, S., Wolkowitz, O., Reus, V., Chan, T., Moore, E. (1997). Serotonergic intervention increases affiliative behavior in humans. Annals of the New York Academy of Sciences, 807, 492-493.
54. **Knutson, B.**, Panksepp, J. (1997). Effects of serotonin depletion on the play of juvenile rats. Annals of the New York Academy of Sciences, 807, 475-477.
55. **Knutson, B.**, Panksepp, J., Pruitt, D. (1996). Effects of fluoxetine on play dominance in juvenile rats. Aggressive Behavior, 22, 241-257.
56. **Knutson, B.** (1996). Facial expressions of emotion influence interpersonal trait inferences. Journal of Nonverbal Behavior. 20, 165-182.
57. Wegner, D. M., Schneider, D. J., **Knutson, B.**, McMahon, S. R. (1991). Polluting the stream of consciousness: The effect of thought suppression on the mind's environment. Cognitive Therapy and Research, 15, 141-157.

#### *Submitted Articles*

1. Beck, A., Schlagenhaut, F., Wustenberg, T., Hein, J., Kienast, T., Kahnt, T., Schmack, K., Hagele, C., **Knutson, B.**, Heinz, A., Wrase, J. (Submitted). Ventral striatal activation during reward anticipation correlates with impulsivity in alcoholics.
2. Samanez-Larkin, G. R., Kuhnen, C. M., Yoo, D. J., **Knutson B.** (Submitted). Anterior caudate activity mediates age-related financial mistakes.
3. Stoy, A. M., Schlagenhaut, F., Sterzer, P., Hagele, C., Suchotzki, K., Schmack, K., Ricken, R., Wrase, J., Bermanpohl, F., **Knutson, B.**, Adli, M., Bauer, M., Heinz, A., Strohle, A. (Submitted). Hyporeactivity of ventral striatum towards incentive stimuli in unmedicated depressed patients normalizes after treatment with escitalopram.
4. Cooper, J. C., Hollon, N. G., Wimmer, G. E., **Knutson, B.** (Submitted). Alternative outcomes modulate nucleus accumbens activation during incentive anticipation.

5. Kuhnen, C. M., **Knutson, B.** (Submitted). The impact of anticipatory affect on beliefs, preferences, and financial risk taking.
6. **Knutson, B.**, Nielsen, L., Samanez-Larkin, G. R., Carstensen, L. L. (Submitted). Probing affect dynamics.

### *Chapters & Reviews*

1. **Knutson, B.**, Delgado, M. R., Phillips P. E. (2008). Representation of subjective value in the striatum. In Glimcher, P. W., Camerer, C. F., Fehr, E., Poldrack, R. A. (Eds.). Neuroeconomics: Decision making and the brain. Oxford: Oxford University Press, pp. 387-403.
2. **Knutson, B.**, Wimmer, G. E. (2007). Reward: Neural circuitry for social valuation. In Harmon-Jones, E., & Winkielman, P. (Eds.). Social Neuroscience: Integrating biological and psychological explanations of social behavior. New York: Guilford Press, pp. 157-175.
3. **Knutson, B.**, Bhanji, J. (2006). Neural substrates for emotional traits: The case of extraversion. In Canli, T. (Ed.). Biology of Personality and Individual Differences. New York: Guilford Press, pp. 116-132.
4. **Knutson, B.**, Heinz, A. (2003). Psychobiology of personality disorders. In J. Panksepp (Ed.), Textbook of Biological Psychiatry. New York: John Wiley and Sons, pp. 145-165.
5. Panksepp, J., **Knutson, B.**, Pruitt, D. (1998). Toward a neuroscience of emotion: Epigenetic foundations of emotional development. In M. F. Mascolo & S. Griffin (Eds.), What Develops in Emotional Development. New York: Plenum, pp. 53-84.
6. Panksepp, J., **Knutson, B.** (1996). Making sense of our emotions [Review of the book Passion and Reason]. Contemporary Psychology. 41, 710-711.
7. Panksepp, J., **Knutson, B.**, Bird, L. (1995). On the brain and personality substrates of psychopathy. Brain and Behavioral Sciences, 18(3), 568-570.

### *Published Abstracts*

1. Samanez-Larkin, G.R., Yoo, D., **Knutson, B.** (2007) Incentive-based decision-making in older adults. Gerontological Society of America, San Francisco, CA.
2. Samanez-Larkin, G. R., Khanna, K., Kuhnen, C., **Knutson, B.** (2006). Financial decision making and risk taking in younger and older adults. Cognitive Aging Conference, Atlanta, GA.
3. Cooper, J. C., Bhanji, J. P., **Knutson, B.** (2006). Saliency or gain – Comparing accounts of nucleus accumbens function. Cognitive Neuroscience Society, San Francisco, CA.
4. Larkin, G. R., Gibbs, S. E. B., Nielsen, L., Khanna, K., Carstensen, L., **Knutson, B.** (2006). Neural responsiveness to anticipated gain and loss in younger and older adults. Cognitive Neuroscience Society, San Francisco, CA.



5. **Knutson, B.**, Kuhnen, C. M. (2005). Neural antecedents of financial risk-taking. Society for Neuroscience Abstracts, Washington, DC.
6. Nielsen, L., **Knutson, B.**, Larkin, G. R., Carstensen, L. L. (2005). Affect dynamics. Society for Neuroeconomics, Charleston, SC.
7. Adcock, R.A., **Knutson, B.**, Thangavel, A., Gabrieli, J. D. E. (2005). Reward-motivated learning. Society for Neuroeconomics Charleston, SC.
8. Schlagenhaut, F., Juckel, G., Koslowski, M., Wustenberg, T., **Knutson, B.**, Wrase, J., Heinz, A (2005). Dysfunction of the brain reward system in schizophrenics. NeuroImage, 26, Toronto, Canada.
9. Fong, G. W., **Knutson, B.**, Risinger, R. C., Bjork, J. M., Danube, C. L., Bennett, S. M., Hommer, D. W. (2005). Hyperactivation of reward-related mesolimbic areas in alcoholics who subsequently relapse. NeuroImage, 26, Toronto, Canada.
10. Nielsen, L., **Knutson, B.**, Kaufman, M., Weinstein, L., Carstensen, L. (2004). Facial EMG discriminates gain and loss anticipation and outcome in a monetary incentive delay task. Society for Psychophysiological Research.
11. **Knutson, B.**, Cooney, R. E., Atlas, L., Bhanji, J., Gotlib, I. H. (2004). Reward anticipation in major depressive disorder: An fMRI investigation. Society for Research in Psychopathology, Miami, FL.
12. **Knutson, B.**, Fong, G. W., Bennett, S. M., Bjork, J., Hommer, D. (2003). FMRI visualization of a valence gradient in the human nucleus accumbens. NeuroImage, New York, NY.
13. **Knutson, B.**, Fong, G. W., Bennett, S. M., Taylor, J., Hommer, D. (2003). Extraversion predicts nucleus accumbens activation to anticipated monetary reward. NeuroImage, New York, NY.
14. Taylor, J., **Knutson, B.**, Worsley, K. (2003). Incorporating spatial information into FDR thresholding of SPMs. NeuroImage, New York, NY.
15. Fong, G. W., **Knutson, B.**, Bennett, S. M., Momenan, R., Danube, C., Hommer, D. (2003). Reward processing in alcoholic patients and healthy volunteers: A FMRI study of the mesial prefrontal cortex. NeuroImage, New York, NY.
16. Fong, G. W., **Knutson, B.**, Bennett, S. M., Adams, C. M., Hommer, D. (2002). Anticipating monetary reward: FMRI comparison of alcoholics and healthy volunteers. Society for Neuroscience Abstracts.
17. Bjork, J. M., **Knutson, B.**, Fong, G. W., Hommer, D., Bennett, S. M., Caggiano, D. (2002). Neural responsiveness to monetary reward in adolescents: An FMRI investigation. Society for Neuroscience Abstracts.
18. Fong, G. W., **Knutson, B.**, Adams, C. M., Bennett, S. M., Hommer, D. (2002). FMRI characterization of a region that tracks rewarding outcomes. NeuroImage (Supplement).

19. **Knutson, B.**, Adams, C., Fong, G., Walker, J., Hommer, D. (2001). Parametric fMRI confirms selective recruitment of nucleus accumbens during anticipation of monetary reward. NeuroImage (Supplement).
20. Fong, G., **Knutson, B.**, Adams, C., Hommer, D. (2001). Event-related fMRI reveals distinct neural correlates of reward anticipation versus feedback. NeuroImage (Supplement).
21. Shen, J., Rio, D., Momenan, R., **Knutson, B.**, Rawlings, R., Moon, K., Woltz, L., Hommer, D. (2001). Differential brain activation response to different frequencies of acupuncture. NeuroImage (Supplement).
22. Rio, D., Rawlings, R., **Knutson, B.**, Hommer, D. (2001). Statistical estimation of the hemodynamic response function by application of a time invariant model in the Fourier domain to fMRI data. NeuroImage (Supplement).
23. Winterer, G., **Knutson, B.**, Adams, C., Jones, D., Hommer, D., Weinberger, D., Coppola, R. (2001). Brain activation in space-time: A combined event-related fMRI and high-density EEG study. NeuroImage (Supplement).
24. Bjork, J. M., Hommer, D., **Knutson, B.**, Israel, M. (2001). Laboratory correlates of aggressiveness in alcoholic inpatients. Society for Research on Alcoholism Abstracts.
25. **Knutson, B.**, Hommer, D., Fong, G., Momenan, R., Kaiser, E., Rawlings, R. R. (2000). Neuroticism correlates with gray matter reduction in a sample of alcoholics and healthy volunteers. Society for Neuroscience Abstracts, 754.5, 2017.
26. Burgdorf, J., Gordon, N., **Knutson, B.**, Panksepp, J. (2000). Ultrasonic vocalizations are a sensitive measure of positive and negative affective states in rats. Society for Neuroscience Abstracts, 177.12, 483.
27. **Knutson, B.**, Fong, G., Kaiser, E., Adams, C., Hommer, D. (2000). Anticipation of monetary reward activates nucleus accumbens. NeuroImage, 9, S237.
28. **Knutson, B.**, Adams, C., Kaiser, E., Walker, J., Hommer, D. (2000). fMRI visualization of brain activity during anticipation of monetary reward. Journal of Cognitive Neuroscience, 74B, Suppl S.
29. **Knutson, B.**, Kaiser, E., Momenan, R., Walker, J., Westdorp, A., Hommer, D. (1999). Anticipation of monetary incentives evokes brain activity: An fMRI replication and extension. Society for Neuroscience Abstracts, 858.10, 2147.
30. Burgdorf, J., **Knutson, B.**, Panksepp, J. (1999). Evidence that rat ultrasonic calls can index both positive and negative affective states. Society for Neuroscience Abstracts, 351.14, 875.
31. **Knutson, B.**, Kaiser, E., Westdorp, A., Hommer, D. (1999). Personality predicts brain activation to incentives. NeuroImage, 8, S360.

32. Rio, D., Rawlings, R., **Knutson, B.**, Westdorp, A., Hommer, D. (1999). Statistical analysis of functional magnetic resonance images in the fourier domain using a linear time invariant model. NeuroImage, 8, S88.
33. **Knutson, B.**, Westdorp, A., Kaiser, E., Hommer, D. (1998). Brain activation during approach and active avoidance: An FMRI study. Society for Neuroscience Abstracts, 271.16, 692.
34. **Knutson, B.**, Westdorp, A., Hommer, D. (1998). Functional neuroanatomy of approach and active avoidance using FMRI. NeuroImage, 7, S918.
35. **Knutson, B.**, Burgdorf, J., Panksepp, J. (1997). High-frequency ultrasonic vocalizations mark amphetamine preference in adult rats. Society for Neuroscience Abstracts, 520.1, 1319.
36. **Knutson, B.**, Panksepp, J., Narayanana, T. K., Rossi, J. III (1996). Early central serotonin damage increases “anxious” behaviors in juvenile rats. Society for Neuroscience Abstracts, 177.12, 446.
37. **Knutson, B.**, Panksepp, J. (1995). Clomiprimine pretreatment blocks the development of schedule-induced polydipsia in rats. Society for Neuroscience Abstracts, 657.1, 1671.
38. **Knutson, B.**, Dryer, C. (1991). An other-reference effect: Culture and social cognition. Poster session presented at the Western Psychology Association Conference, San Francisco, CA.
39. **Knutson, B.** (1989). Effects of thought suppression on public speech performance. Poster session presented at the Southwestern Psychological Association Conference, Houston, TX.

## Talks

1. **Knutson, B.** (2009). Neural antecedents of financial decisions. Colloquium presented to the Center for Decision Research, University of Chicago Business School, Chicago, IL.
2. **Knutson, B.** (2009). Neural antecedents of financial decisions. Keynote address presented to the Campus for Finance New Year’s Conference 2009, WHU Otto Beisheim School of Management, Vallendar, Germany.
3. **Knutson, B.** (2008). Neural antecedents of the endowment effect. Talk presented at the Society for Neuroscience Conference, Washington, DC.
4. **Knutson, B.** (2008). Distinguishing impulse from impulse control with FMRI. Invited talk presented at the NIDA Frontiers in Addiction Research Mini-Conference, Washington, DC.
5. **Knutson, B.** (2008). Watching the brain make choices. Invited talk presented to the National Association of Science Writers, New Horizons in Science Conference, Palo Alto, CA.

6. **Knutson, B.** (2008). This is your brain on money. Invited talk presented to the Science Network, Beyond Belief III Conference, San Diego, CA.  
[video.google.com/videoplay?docid=-5145313645738206463]
7. **Knutson, B.** (2008). Neural representation of expected value. Colloquium presented to the Department of Psychology, National Taiwan University, Taipei, Taiwan.
8. **Knutson, B.** (2008). Emotion in thought, action, and law. Invited seminar presented at the Gruter Institute Seminar on Law and Neuroscience, Stanford Law School, Stanford, CA.
9. **Knutson, B.** (2008). Brain, decision, and debt. Invited seminar presented at A Debtor World: Interdisciplinary Academic Symposium on Debt, University of Illinois Law School, Champaign-Urbana, IL.
10. **Knutson, B.** (2008). Neural representation of expected value. Colloquium presented to the Department of Psychology, Vanderbilt University, Nashville, TN.
11. **Knutson, B.**, Wimmer, G. E., Kuhnen, C. M., Winkielman P. (2008). Nucleus accumbens activation mediates the influence of reward cues on financial risk-taking. Symposium presented at the Cognitive Neuroscience Society Meeting, San Francisco, CA.
12. **Knutson, B.** (2008). Neural representation of expected value. Invited colloquium presented to the College of Liberal Arts, University of Minnesota, Minneapolis, MN.
13. **Knutson, B.** (2008). Expected value and the neural prediction of decisions. Invited talk presented to the Department of Neurology, UCSF Medical School, San Francisco, CA.
14. **Knutson, B.** (2008). What is the science of value? Invited talk presented to the Colloquium on Law and Behavior, Stanford Law School, Stanford, CA.
15. **Knutson, B.** (2008). What is the science of value? Invited talk presented to the Conference on Legal Institutions and Entrepreneurship, Center for the Advanced Studies in the Behavioral Sciences, Stanford, CA.
16. **Knutson, B.**, Delgado, M. R., Phillips, P. E. M. (2008). Representation of subjective value in the striatum. Invited talk presented at the Neuroeconomics Conference, New York, NY.
17. **Knutson, B.** (2008). Neural predictors of purchases. Invited symposium presented at the American Economics Association Convention, New Orleans, LA.
18. **Knutson, B.** (2007). Expected value and the neural prediction of decisions. Invited talk presented at the Uses of Functional Neuroimaging in Neuroscience Symposium, Department of Neurology, University of California San Francisco, San Francisco, CA.
19. **Knutson, B.** (2007). Predicting choice with fMRI. Invited talk presented to the Neuroscience Institute Colloquium, Stanford, CA.
20. **Knutson, B.** (2007). Neural representation of expected value. Invited talk presented at the Palo Alto Research Center Forum, Palo Alto, CA.

21. **Knutson, B.** (2007). Expected value and the neural prediction of decisions. Invited talk presented at the Neurofinance Symposium, University of Zurich, Zurich, Switzerland.
22. **Knutson, B.**, Wimmer, G. E., Kuhnen, C. M., Winkielman, P. (2007). Exogenous manipulation of nucleus accumbens activation and financial risk-seeking. Invited talk presented to the Organization of Human Brain Mapping, Chicago, IL.
23. **Knutson, B.** (2007). Neural representation of expected value. Invited colloquium presented jointly to the Departments of Economics and Psychology, University of Oregon, Eugene, Oregon.
24. **Knutson, B.** (2007). Neural representation of expected value. Invited talk presented at the conference "Brain reward systems: from molecular signaling pathways to neuronal networks," Fondation des Treilles, Provence, France.
25. **Knutson, B.** (2007). Neural predictors of purchases. Invited talk presented to the Functional Imaging Lab, University College of London, London, United Kingdom.
26. **Knutson, B.** (2007). Neural predictors of purchases. Invited talk presented to the Emotion Research Group, Point Reyes, CA.
27. **Knutson, B.** (2007). Neural representation of expected value. Invited talk presented as part of the Major Speakers in Neuroeconomics Research Series, Department of Neuroscience, Duke University, Durham, NC.
28. **Knutson, B.** (2006). Neuroeconomics. Invited keynote address presented to the Council of Scientific Society Presidents, Washington, DC.
29. **Knutson, B.** (2006). Neural representation of expected value. Invited colloquium presented at the Montreal Neurological Institute, McGill University, Montreal, CA.
30. **Knutson, B.** (2006). FMRI probes of reward prediction in adolescents and adults. Invited talk presented at the Assessment of Reward Function During Development Minisymposium, Society for Neuroscience Conference, Atlanta, GA.
31. **Knutson, B.** (2006). Neural predictors of purchases. Talk presented at Motivation and Emotion: Decision-Making Session (Chair), Society for Neuroscience Conference, Atlanta, GA.
32. **Knutson, B.** (2006). Neural predictors of purchases. Talk presented at Neuroeconomics 2006, Park City, UT.
33. **Knutson, B.** (2006). Neural antecedents of financial risk taking. Invited talk presented to the Working Group on Cognition and Decision Making, National Institute of Aging Intramural Program, Bethesda, MD.
34. **Knutson, B.** (2006). Neural representation of expected value. Invited keynote address presented to Division 3 of the American Psychological Association, New Orleans, LA.

35. **Knutson, B.** (2006). Neural representation of expected value. Invited talk presented at the Neuroeconomics Summer School, Stanford University, Stanford, CA.
36. **Knutson, B.** (2006). Neural antecedents of financial risk-taking. Invited talk presented to the Mood and Anxiety Disorders Program, National Institutes of Health, Bethesda, MD.
37. **Knutson, B.** (2006). Affective neuroscience studies of reward processing: Implications for addiction. Invited talk presented at the Office of Behavior and Social Science Research Tenth Anniversary Celebration, National Institutes of Health, Bethesda, MD.
38. **Knutson, B.** (2006). FMRI of reward processing: An ascending difference model. Invited talk presented to the Reward and decision making in cortico-basal ganglia networks Conference, UCLA Conference Center, Lake Arrowhead, CA.
39. **Knutson, B.** (2006). Neural basis of expected value. Invited talk presented to the Sackler Institute for Developmental Psychobiology, Weill Medical College, New York, NY.
40. **Knutson, B.** (2006). New findings from neurofinance. Invited keynote address presented to the Institutional Investor Trader Forum, San Diego, CA.
41. **Knutson, B.** (2006). Can motivation move memory? Invited talk presented to the Emotion Research Group, Miami, FL.
42. **Knutson, B.** (2006). Neural antecedents of financial risk-taking. Colloquium presented to the Department of Marketing, University of California Business School, Berkeley, CA.
43. **Knutson, B.** (2006). Neural antecedents of financial risk-taking. Invited symposium presented to the Affective Sciences Emerging Conference, Swissnex, San Francisco, CA.
44. **Knutson, B.** (2006). Neural antecedents of financial risk-taking. Colloquium presented to the Department of Neurobiology and Anatomy, University of Texas at Houston, Houston, TX.
45. **Knutson, B.** (2006). Neural antecedents of financial risk-taking. Invited talk presented to the Human Neuroimaging Laboratory, Baylor College of Medicine, Houston, TX.
46. **Knutson, B.** (2006). Neural antecedents of financial risk-taking. Colloquium presented to the Department of Psychology, University of Arizona, Tucson, AZ.
47. **Knutson, B.** (2006). Neural antecedents of financial risk-taking. Invited talk presented at the Judgment and Decision Making Preconference (SPSP), Palm Springs, CA.
48. **Knutson, B.** (2006). Neural antecedents of financial risk-taking. Invited talk presented at the Alpine Brain Imaging Meeting, Champéry, Switzerland.
49. **Knutson, B.** (2006). Neural antecedents of financial risk-taking. Colloquium presented to the Institute for Empirical Research in Economics, Zurich, Switzerland.
50. **Knutson, B.** (2006). Reward expectation in schizophrenics and healthy volunteers. Invited talk presented at the Schizophrenia in Berlin Conference to Charite Medical School,

Berlin, Germany.

51. **Knutson, B.** (2005). Neural antecedents of financial risk-taking. Colloquium presented to the Stanford Graduate School of Business, Stanford, CA.
52. **Knutson, B.** & Kuhnen, C. M. (2005). Neural antecedents of financial risk-taking. Talk presented at the Society for Neuroscience Conference, Washington, D.C.
53. **Knutson, B.** (2005). Craving, Suffering, and Choice. Invited panelist for Conference with the Dalai Lama, Stanford Medical School, Stanford, CA.
54. **Knutson, B.** (2005). Addiction, neurobiology, and evolution. Invited talk presented to the Frontiers of Science Symposium, National Academy of Science, Irvine, CA.
55. **Knutson, B.** (2005). FMRI of reward: Clinical applications. Invited talk presented to the Health Psychology Program, UCSF Medical School, San Francisco, CA.
56. **Knutson, B.** (2005). Irrational exuberance. Colloquium presented to the Department of Psychology, Boston College, Boston, MA.
57. **Knutson, B.** (2005). FMRI of expected value. Invited talk presented to the Brain and Cognitive Sciences Department, Massachusetts Institute of Technology, Boston, MA.
58. **Knutson, B.** (2005). Irrational exuberance. Invited talk presented to the Economics Department, New York University, New York, NY.
59. **Knutson, B.** (2005). FMRI of expected value. Colloquium presented to the Department of Social and Decision Sciences, Carnegie Mellon University, Pittsburgh, PA.
60. **Knutson, B.** (2005). FMRI of expected value. Invited talk presented to the Department of Neurology, UCSF Medical School, San Francisco, CA.
61. **Knutson, B.** (2005). Neurally reconstructing expected utility. Invited seminar presented to the American Economics Association, Philadelphia, PA.
62. **Knutson, B.** (2005). Hedonic metrics and recipes. Invited commentary on Kahneman et al (2004) presented to the American Economics Association, Philadelphia, PA.
63. **Knutson, B.** (2004). Modeling reward processing: FMRI validation and psychopharmacological application. Invited talk presented to the American College of Neuropsychopharmacology, San Juan, PR.
64. **Knutson, B.** (2004). FMRI of expected value. Colloquium presented to the Anderson School of Management, University of California, Los Angeles, CA.
65. **Knutson, B.** (2004). FMRI of expected value. Talk presented at the Society for Neuroscience Conference, San Diego, CA.
66. **Knutson, B.** (2004). Brain imaging of the reward system. Invited talk presented at the Second Emotional Neuroscience Conference, Humboldt University, Berlin, Germany.

67. **Knutson, B.** (2004). Neural responses to money: Theme and variations. Invited talk presented at Neuroeconomics 2004, Kiawah Island, SC.
68. **Knutson, B.** (2004). FMRI of expected utility. Invited talk presented to the Computational Neuroimaging Workshop, Stanford University, Stanford, CA.
69. **Knutson, B.** (2004). Neural substrates for emotional traits. Invited talk presented to the Biological Basis of Individual Differences Conference, SUNY-Stony Brook, Long Island, NY.
70. **Knutson, B.** (2004). Pharmacological modulation of mood. Invited talk and Panel Discussion presented at the New York Academy of Sciences, New York City, NY.
71. **Knutson, B.** (2004). Role of the mesial prefrontal cortex in reward processing. Invited symposium presented at the American Psychological Society, Chicago, IL.
72. **Knutson, B.** (2004). New frontiers in the conceptualization and visualization of impulsivity. Invited seminar presented at the National Clinical Drug Evaluation Unit, Phoenix, AZ.
73. **Knutson, B.** (2004). Neurally reconstructing expected utility. Invited talk presented to the Economics Department, University of California, Berkeley, CA.
74. **Knutson, B.** (2004). Visualizing desire. Colloquium presented to the Center for Neural Science, Cal Tech, Pasadena, CA.
75. **Knutson, B.** (2003). FMRI of human reward processing. Colloquium presented to the Department of Psychology, University of Michigan, Ann Arbor, MI.
76. **Knutson, B.** (2003). Visualizing desire. Invited symposium presented for the Great Schools Series, Smithsonian Institute, Washington, DC.
77. **Knutson, B., Mattay, V., Bjork, J., Fong, G. W., Hommer, D., Weinberger, D.** (2003). Amphetamine modulates reward processing in humans: FMRI evidence. Talk presented at the Society for Neuroscience Conference, New Orleans, LA.
78. **Knutson, B.** (2003). Anticipation of reward: An FMRI approach. Invited symposium presented at the NIDA Frontiers in Addiction Mini-Conference, New Orleans, LA.
79. **Knutson, B.** (2003). Searching for the neural basis of expected utility. Invited talk presented at Neuroeconomics 2003, Martha's Vineyard, MA.
80. **Knutson, B.** (2003). What can FMRI tell us about human reward processing? Invited talk presented at the First Emotional Neuroscience Conference, Humboldt University, Berlin, Germany.
81. **Knutson, B.** (2003). FMRI activation of striatum and cerebellum by anticipation of reward. Invited talk presented to the Pediatric Neuroscience Network on ADHD, New York, NY.



82. **Knutson, B.** (2003). FMRI of human reward circuitry. Colloquium presented to the NIDA Intramural Research Program, Baltimore, MD.
83. **Knutson, B.** (2003). FMRI of human reward circuitry. Invited talk presented to the Baylor College of Medicine Theoretical and Computational Neuroscience Group, Houston, TX.
84. **Knutson, B.** (2003). Ultrasonic vocalizations as indices of affect in rats. Invited talk presented at the Society for Biological Psychiatry Conference, San Francisco, CA.
85. **Knutson, B.** (2003). Visualizing Desire. Colloquium presented to the Department of Psychology, University of California, Santa Cruz, CA.
86. **Knutson, B.** (2003). What is the science of value?. Colloquium presented to the Stanford Graduate School of Business, Stanford, CA.
87. **Knutson, B.** (2003). Affect dynamics: What's the difference between anticipation and outcome? Invited talk presented to the Emotion Research Group, Point Reyes, CA.
88. **Knutson, B.** (2002). Do rats laugh? Scientific fact is stranger than media fiction. Colloquium presented to the Department of Psychology, University of California, Berkeley, CA.
89. **Knutson, B.** (2002). Visualizing Desire. Colloquium presented to the Department of Psychology, University of California, Davis, CA.
90. **Knutson, B.** (2002). Dissociation of reward anticipation and outcome with event-related FMRI. Invited talk presented to the First Conference on Neuroscience and Economics at the Carleton School of Management, University of Minnesota, Minneapolis, MN.
91. **Knutson, B.** (2002). Visualizing Desire. Grand Rounds presented to the Psychiatry Department, San Mateo County Health Service, San Mateo, CA.
92. **Knutson, B.** (2002). FMRI of human reward circuitry. Keynote address delivered at the Ernest Gallo Research Center Retreat, Tahoe, CA.
93. **Knutson, B.** (2002). FMRI characterization of a region of mesial prefrontal cortex that tracks rewarding outcomes. Invited talk presented to the Society for Psychophysiological Research, Washington, DC.
94. **Knutson, B.** (2002). Deconstructing human reward processing with FMRI. Invited talk presented to the Stanford Institute for Theoretical Economics, Palo Alto, CA.
95. **Knutson, B.** (2002). Valence in the brain?: FMRI explorations of human reward circuitry. Invited talk presented at the International Society for Research in Emotion Conference, Cuenca, Spain.
96. **Knutson, B.** (2002). A neural substrate for reward anticipation: Emerging evidence from neuroscience. Symposium presented to the Academy of Behavioral Medicine Research, Key West, FL.

97. **Knutson, B.** (2002). Ultrasonic vocalizations as indices of affect in rats. Invited talk presented to the Emotion Research Group, Glen Mills, PA.
98. **Knutson, B.** (2002). Ultrasonic vocalizations as markers of affect in rats. Colloquium presented to the CNS Division of Roche Pharmaceuticals, Palo Alto, CA.
99. **Knutson, B.** (2001). What can FMRI tell us about human reward processing?. Colloquium presented to the Wheeler Center for the Neurobiology of Addiction, University of California, San Francisco, CA.
100. **Knutson, B.** (2001). What can FMRI tell us about human reward processing?. Colloquium presented to the Brain Imaging Group, Department of Psychiatry, Columbia University, New York, NY.
101. **Knutson, B.,** Fong, G., Adams, C. M., Hommer, D. (2001). FMRI models for assessing cue response in alcoholism. Invited talk presented to the Seventh World Congress on Biological Psychiatry, Berlin, Germany.
102. **Knutson, B.** (2001). Where does affect dwell?: Forays into the brain. Colloquium presented to the Department of Psychology, American University, Washington, DC.
103. **Knutson, B.** (2000). Where does affect dwell?: Forays into the brain. Colloquium presented to the Department of Psychology, Stanford University, Stanford, CA.
104. **Knutson, B.** (2000). Where does affect dwell?: Forays into the brain. Colloquium presented to the Departments of Psychology, University of California Los Angeles and University of Southern California, Los Angeles, CA.
105. **Knutson, B.,** Fong, G., Kaiser, E., Adams, C., & Hommer, D. (2000). Anticipation of monetary reward activates nucleus accumbens. Invited talk presented to the Organization of Human Brain Mapping, San Antonio, TX.
106. **Knutson, B.** (1999). Brain activation for monetary incentives: anticipation versus response. Colloquium presented to the Intramural Program of the National Institute on Drug Abuse Extramural Program, Bethesda, MD.
107. **Knutson, B.** (1998). Functional neuroanatomy of approach and active avoidance. Colloquium presented to the Krasnow Institute for Advanced Studies, George Mason University, Manassas, VA.
108. **Knutson, B.** (1998). Listening to paroxetine: What can it tell us about personality? Grand Rounds presented to the Department of Psychiatry, University of California, San Francisco, CA.
109. **Knutson, B.** (1997). Effects of serotonergic manipulations on affect and social behavior. Colloquium presented to the Center for Group Dynamics, University of Michigan, Ann Arbor, MI.
110. **Knutson, B.** (1996). What is the function of serotonin in emotion regulation? Invited talk presented to the Human Behavior and Evolution Society, Chicago, IL.

111. **Knutson, B.** (1996). Personality effects of paroxetine in healthy humans. Invited talk presented to the American Psychiatric Association Conference, New York, NY.
112. **Knutson, B.** (1989). Tengboche in transition: Tourism's psychological impact on a Himalayan monastic community. Paper presented at the Southwest Religion Conference, Dallas, TX.

### Courses Taught

Affective Neuroscience, Stanford University  
 Amines and Affect, Stanford University  
 Brain and Decision, Stanford University  
 Introduction to Personality, Stanford University, Johns Hopkins University  
 Introduction to Psychology, Stanford University  
 Frontiers of Personality, Stanford University  
 Psychology of Emotion, Stanford University  
 Reward and the Brain, Stanford University  
 Medical Applications of FMRI, National Institute of Health\*  
 Neuroeconomics, Stanford University\*  
 Neuroeconomics Workshop, Stanford University\*  
 Neuroscience Approaches to Emotion, U. C. Berkeley\*  
 \*team-taught

### University Service

2006-present *Representative*, Institutional Review Board, Stanford University  
*Co-Director*, Brain Imaging Center, Stanford University  
 2001-present *Guest Lecturer*, Biological Basis of Behavior, Cognitive Neuroscience, Human Behavioral Biology, Introduction to Psychology, Introduction to Neuroscience, Introduction to Personality  
 2001-2005 *Member*, Graduate Admissions Committee, Stanford University  
*Member*, Undergraduate Education Committee, Stanford University  
*Member*, Computer/Shop/Library Committee, Stanford University

### Professional Activities

2007-present *Advisory Council*, Express Scripts  
 2005-present *Reviewer*, National Science Foundation Grant Proposals  
 2005 *Advisor*, Neuroeconomics and Aging Teleconference, Neuroeconomics and Aging Conference, Decision Making and Aging Conference: NIA  
 2002-present *Core Training Faculty*, Bay Area Training Consortium in Affective Science; Stanford Personality Psychology Training Grant; Stanford Cognitive Psychology Training Grant; Stanford Neuroscience Training Grant  
 2002-present *Reviewer*, National Institute of Health R21, R24, and T32 Grant Proposals  
 1999-2000 *Instructor*, Johns Hopkins University Psychology Department

### Editorial Activities

*Consulting Editor:*

Social, Cognitive, and Affective Neuroscience

*Reviewer:*

American Journal of Psychiatry; Archives of General Psychiatry; Alcoholism: Clinical and Experimental Research; Behavioral Neuroscience; Biological Psychiatry; Brain and Behavioral Sciences; Brain Research; Cerebral Cortex; Cognitive, Affective, and Behavioral Neuroscience; Developmental Science; Emotion; European Journal of Neuroscience; Games and Economic Behavior; Journal of Neurophysiology; Journal of Neuroscience; Journal of Cognitive Neuroscience; Journal of Personality and Social Psychology; **Nature**; Nature Neuroscience; Nature Reviews Neuroscience; NeuroImage; Neuron; NeuroReport; Neuropsychopharmacology; Physiology and Behavior; PLoS: Biology; Proceedings of the National Academy of Science; Psychological Science; Psychopharmacology; Psychophysiology; **Science**; Trends in Cognitive Science

*Press Coverage (selected):*

American Broadcasting Corporation; Associated Press; Bloomberg; British Broadcasting Corporation; Economist; Forbes; Nature; New Scientist; New York Times; National Public Radio; People; Reuters; Time; Science; Wall Street Journal; Wired