

BROOKS R. KING-CASAS

bkcasas at vt.edu

EDUCATION AND EMPLOYMENT

1996 AB	Harvard University, Cambridge, MA <u>Field:</u> Philosophy
2005 PhD	Harvard University, Cambridge, MA. <u>Thesis:</u> Delusions, Memory and Negative Affect in Schizophrenia and Schizoaffective Disorders <u>Field:</u> Psychology (Experimental Psychopathology)
2005 - 2007 Postdoc Fellow	Baylor College of Medicine, Department of Neuroscience, Houston, TX <u>Mentor:</u> P. Read Montague, PhD
2007 - 2010 Assistant Professor	Baylor College of Medicine, Department of Neuroscience and Menninger Department of Psychiatry and Behavioral Sciences, Houston, TX
2008 - 2011 Research Scientist	Michael E DeBakey VA Medical Center, Research Service Line, Houston, TX
2010 - 2016 Assistant Professor	Virginia Tech, Virginia Tech Carilion Research Institute and Department of Psychology, Roanoke/Blacksburg, VA
2011 - present	Salem VA Medical Center, Research Service Line, Salem, VA
2011 - 2016	Virginia Tech Carilion School of Medicine, Department of Psychiatry and Behavioral Medicine, Roanoke, VA
2011 - 2016	Virginia Tech, School of Biomedical Engineering and Sciences, Blacksburg, VA
2013 - 2016	Virginia Tech, Faculty of Health Sciences Blacksburg, VA
2015 - 2016	Virginia Tech, School of Neuroscience, Blacksburg, VA
2016 - present Associate Professor	Virginia Tech, Virginia Tech Carilion Research Institute, Department of Psychology, School of Biomedical Engineering and Sciences, Faculty of Health Sciences, School of Neuroscience, Roanoke/Blacksburg, VA

AWARDS AND HONORS

1997-1998	Harvard University Graduate Prize Fellowship.
1998-2001	Ford Foundation Predoctoral Fellowship.
1998-2000	Sackler Fellowship in Psychobiology.
1999-2002	McMasters Prize for Research, Harvard University.
1999-2002	Stimson Prize for Research, Harvard University.
2002-2003	Harvard University Graduate Prize Fellowship.

- 2006-2007 **American Psychological Association Diversity Program in Neuroscience Postdoctoral Fellowship** (T32MH18882, declined).
- 2006-2007 **Individual Ruth L. Kirschstein National Research Service Award** (F32MH078485).
- 2011 **Virginia Tech Scholar of the Week**, July 9
- 2012 **Kavli Frontier in Science Fellow**, National Academy of Science

PROFESSIONAL DEVELOPMENT AND CONTRIBUTIONS

Member: Society for Neuroscience; Cognitive Neuroscience Society; Organization for Human Brain Mapping; Association for Psychological Science.

- Committees:** Program Committee Member, Society for Psychophysiological Research (2000).
- Department of Neuroscience, Baylor College of Medicine: Faculty Search Committee (2006-2008).
- Department of Neuroscience, Baylor College of Medicine: Seminar Series (2009-2010).
- Baylor College of Medicine: Institutional Diversity Council (2009-2010).
- Rehabilitation Research and Development Service, Department of Veterans Affairs: Scientific Merit Review Panel (2009-2011).
- Committee for Facilities and Services, Virginia Tech Carilion Research Institute (2011).
- Research Curriculum Committee, Virginia Tech Carilion School of Medicine (2011).
- Reviewer, Clinical Research Center of Geneva, Switzerland (2012).
- Advisory Board for the Office of Undergraduate Research, Virginia Tech (2011-2012).
- Translational Biology, Medicine, and Health Program, Virginia Tech: Admission Committee (2013-2014)
- Translational Biology, Medicine, and Health Program, Virginia Tech: Curriculum Committee (2014)
- Rehabilitation Research and Development Service, Department of Veterans Affairs: Career Development Award Panel (2014).
- Department of Economics, Virginia Tech: Faculty Search Committee (2014-2015).
- Rehabilitation Research and Development Service, Department of Veterans Affairs: Career Development Award Panel (2015).
- National Institute of Mental Health (NIMH) Special Emphasis Scientific Review Panel ZMH1 ERB-D (03), review for applications to RFA-MH-16-406 Exploratory Clinical Trials of Novel Interventions for Mental Disorders (R61/R33) (2015).
- Department of Psychology, Virginia Tech: Faculty Search Committee (2015-2016).

PUBLICATIONS

- Deldin, PJ, Deveney, CM, Kim, A, Casas, B, Best, J (2001). A slow wave investigation of working memory biases in mood disorders. *Journal of Abnormal Psychology* 110:267-81. doi:[10.1037/0021-843X.110.2.267](https://doi.org/10.1037/0021-843X.110.2.267)
- King-Casas, B, Tomlin, D, Anen, C, Camerer, CF, Quartz, SR, Montague, PR (2005). Getting to know you: Reputation and trust in a two-person economic exchange. *Science* 308:78-83, doi:[10.1126/science.1108062](https://doi.org/10.1126/science.1108062)
- Commentary: Miller, G (2005). Economic game shows how the brain builds trust. *Science* 308:36, doi:[10.1126/science.308.5718.36a](https://doi.org/10.1126/science.308.5718.36a)
- Deldin, P, Keller, J, Casas, BR, Best, J, Gergen, J, Miller, G (2006). Normal N400 in mood disorders. *Biological Psychology* 71:74-79, doi:[10.1016/j.biopsycho.2005.02.005](https://doi.org/10.1016/j.biopsycho.2005.02.005)
- Montague, PR, King-Casas, B, Cohen, JD (2006). Imaging valuation models in human choice. *Annual Review of Neuroscience* 29:417-448, doi:[10.1146/annurev.neuro.29.051605.112903](https://doi.org/10.1146/annurev.neuro.29.051605.112903)
- Tomlin, D, Kayali, MA, King-Casas, B, Anen, C, Camerer, CF, Quartz, SR, Montague, PR (2006). Agent-specific responses in cingulate cortex during economic exchanges. *Science* 312:1047-1050, doi:[10.1126/science.1125596](https://doi.org/10.1126/science.1125596)
- Li, J, McClure, SM, King-Casas, B, Montague, PR (2006). Policy adjustment in dynamic economic game. *PLoS ONE* 1(1):e103, doi:[10.1371/journal.pone.0000103](https://doi.org/10.1371/journal.pone.0000103)
- Montague, PR, King-Casas, B (2007). Efficient statistics, common currencies and the problem of reward-harvesting. *Trends in Cognitive Sciences* 11:514-519. doi:[10.1016/j.tics.2007.10.002](https://doi.org/10.1016/j.tics.2007.10.002)
- Casement, MD, Shestyuk, AY, Best, JL, Casas, B, Glezer, A, Segundo, MA, Deldin, PJ (2008). Anticipation of affect in dysthymia: Behavioral and neurophysiological indicators. *Biological Psychology* 77:197-204. doi:[10.1016/j.biopsycho.2007.10.007](https://doi.org/10.1016/j.biopsycho.2007.10.007)
- King-Casas, B, Sharp, C, Lomax-Bream, L, Lohrenz, T, Fonagy, P, Montague, PR (2008). The rupture and repair of cooperation in borderline personality disorder. *Science* 321:806-810. doi:[10.1126/science.1156902](https://doi.org/10.1126/science.1156902)
- Commentary: Meyer-Lindenberg, A (2008) Trust me on this. *Science* 321:778-780. doi:[10.1126/science.1162908](https://doi.org/10.1126/science.1162908)
- Rilling, JK, King-Casas, B, Sanfey, A (2008). The neurobiology of social decision-making. *Current Opinion in Neurobiology* 18:159-165. doi:[10.1016/j.conb.2008.06.003](https://doi.org/10.1016/j.conb.2008.06.003)
- Ray, D, King-Casas, B, Montague, PR, Dayan, P (2008). Bayesian model of behavior in economic games. *Advances in Neural Information Processing Systems* 21.
- Deldin, PJ, Naidu, SK, Shestyuk, AY, Casas, BR (2009). Neurophysiological indices of free recall memory biases in major depression: The impact of stimulus arousal and valence. *Cognition & Emotion* 23:1002-20. doi:[10.1080/02699930802273573](https://doi.org/10.1080/02699930802273573)
- Lindsey, L, King-Casas, B, Brovko, J, Chiu, PH (2009). Toward functional neurobehavioral assessment of mood and anxiety. *Conf Proc IEEE Eng Med Biol Soc*.
- Klumpp, H, Keller, J, Miller, GA, Casas, BR, Best, JL, Deldin, PJ (2010). Semantic processing of emotional words in depression and schizophrenia. *International Journal of Psychophysiology* 75:211-215. doi:[10.1016/j.ijpsycho.2009.12.004](https://doi.org/10.1016/j.ijpsycho.2009.12.004)
- Kishida, K, King-Casas, B, Montague, PR (2010). Neuroeconomic approaches to mental disorders. *Neuron* 67:543-54. doi:[10.1016/j.neuron.2010.07.021](https://doi.org/10.1016/j.neuron.2010.07.021)
- Tso IF, Chiu, P, King-Casas, BR, Deldin, PJ. (2011). Alterations in affective processing of attack images following September 11, 2001. *Journal of Traumatic Stress* 24:538-545. doi:[10.1002/jts.20678](https://doi.org/10.1002/jts.20678)
- D'Andrea W, Chiu, P, Casas, B, Deldin, P. (2012). Linguistic predictors of PTSD symptoms following

- September 11, 2001. *Applied Cognitive Psychology* 26:316-323. [doi:10.1002/acp.1830](https://doi.org/10.1002/acp.1830)
- King-Casas, B & Chiu, PH (2012). Understanding social function in psychiatric illness through multi-player economic games. *Biological Psychiatry* 72:119-25. [doi:10.1016/j.biopsych.2012.03.033](https://doi.org/10.1016/j.biopsych.2012.03.033)
- Lauharatanahirun, N, Christopoulos, GI, King-Casas, B (2012). Neural computations underlying social risk sensitivity. *Front Hum Neurosci* 6:213. [doi:10.3389/fnhum.2012.00213](https://doi.org/10.3389/fnhum.2012.00213)
- Eierud, C, Craddock, C, Fletcher, S, Aulakh M, King-Casas, B, Kuehl, D, LaConte, SM (2014). Neuroimaging after mild traumatic brain injury: Review and meta-analysis. *NeuroImage: Clinical* 4:283-294. [doi:10.1016/j.nicl.2013.12.009](https://doi.org/10.1016/j.nicl.2013.12.009)
- Lee, MR, Glassman, M, King-Casas, B, Kelly, DL, Stein, EA, Schroeder, J, Salmeron, BJ (2014). Complexity of oxytocin's effects in a chronic cocaine dependent population. *European Neuropsychopharmacology* 24:1483-91. [doi:10.1016/j.euroneuro.2014.06.005](https://doi.org/10.1016/j.euroneuro.2014.06.005)
- Williams, W, Graham, D, McCurry, K, Sanders, A, Eiseman, J, Chiu, PH, King-Casas, B (2014). Group psychotherapy's impact on trust in veterans with PTSD: A pilot study. *Bulletin of the Menninger Clinic* 78, 335 - 348. [doi:10.1521/bumc.2014.78.4.335](https://doi.org/10.1521/bumc.2014.78.4.335)
- Zhu, L, Jenkins, AC, Set, E, Scabini, D, Knight, RT, Chiu, PH, King-Casas, B, Hsu, M (2014). Damage to dorsolateral prefrontal cortex affects tradeoffs between honesty and self-interest. *Nature Neuroscience* 17:1319-21. [doi:10.1038/nn.3798](https://doi.org/10.1038/nn.3798)
- Christopoulos, GI, King-Casas, B (2015). With you or against you: social orientation dependent learning signals guide actions made for others. *NeuroImage* 104:326-35. [doi:10.1016/j.neuroimage.2014.09.011](https://doi.org/10.1016/j.neuroimage.2014.09.011)
- Chung, D, Christopoulos, G, King-Casas, B, Ball, SB, Chiu, PH (2015) Social signals of safety and risk confer utility and have asymmetric effects on observers' choices. *Nature Neuroscience* 18:912-6. [doi://10.1038/nn.4022](https://doi.org/10.1038/nn.4022)
 Commentary in: Smith, DV & Delgado, MR (2015) Social nudges: utility conferred from others. *Nature Neuroscience* 18, 791 – 792. [doi:10.1038/nn.4031](https://doi.org/10.1038/nn.4031)
- Idelson, CR, Vogt, WC, King-Casas, B, LaConte, SM, Rylander, CG (2015) Effect of mechanical optical clearing on near-infrared spectroscopy. *Lasers in Surgery & Medicine* [doi:10.1002/lsm.22373](https://doi.org/10.1002/lsm.22373)
- Aimone, J, Ball, S, King-Casas, B (2015). The betrayal aversion elicitation task: An individual level of betrayal aversion measure. *PLoS ONE* 10(9):e0137491. [doi:10.1371/journal.pone.0137491](https://doi.org/10.1371/journal.pone.0137491)
- Kim-Spoon, J, Kahn, R, Deater-Deckard, K, Chiu, PH, Steinberg, L, King-Casas, B (2016). Risky decision making in a laboratory driving task is associated with health risk behaviors during late adolescence but not adulthood. *International Journal of Behavioral Development* 40(1):58-63. [doi://10.1177/0165025415577825](https://doi.org/10.1177/0165025415577825)
- Aimone JA, Ball S, King-Casas B (2016). It's not what you see but how you see it: Using eye-tracking to study the risky decision-making process. *Journal of Neuroscience, Psychology, and Economics* 9(3-4):137-144. [doi://10.1037/npe0000061](https://doi.org/10.1037/npe0000061)
- Kim-Spoon J, Deater-Deckard K, Holmes C, Lee J, Chiu P, King-Casas B (2016). Behavioral and neural inhibitory control moderates the effects of reward sensitivity on adolescent substance use. *Neuropsychologia* 91:318-326. [doi://10.1016/j.neuropsychologia.2016.08.028](https://doi.org/10.1016/j.neuropsychologia.2016.08.028)
- Aimone JA, Ball S, King-Casas B (2016). 'Nudging' risky decision-making: The causal influence of information order. *Economic Letters* 149(C):161-163. [doi://10.1016/j.econlet.2016.10.030](https://doi.org/10.1016/j.econlet.2016.10.030)
- Kahn RE, Deater-Deckard K, King-Casas B, Kim-Spoon J (2016). Intergenerational similarity in callous-unemotional traits: Contributions of hostile parenting and household chaos during adolescence. *Psychiatry Research* 246:815-820. [doi://10.1016/j.psychres.2016.10.023](https://doi.org/10.1016/j.psychres.2016.10.023)
- Chung D, Kadlec K, Aimone JA, McCurry K, King-Casas B, Chiu PH (2017). Valuation in major depression is intact and stable in a non-learning environment. *Scientific Reports* 7:44374. [doi://10.1038/srep44374](https://doi.org/10.1038/srep44374)

Kim-Spoon J, Kahn RE, Lauharatanahirun N, Deater-Deckard K, Bickel WK, Chiu PH, King-Casas B (2017). Executive functioning and substance use in adolescence: Neurobiological and behavioral perspectives. *Neuropsychologia* 100:79-92. [doi://10.1016/j.neuropsychologia.2017.04.020](https://doi.org/10.1016/j.neuropsychologia.2017.04.020)

RESEARCH SUPPORT

Ongoing Research Support

R01 DA036017 King-Casas/Kim-Spoon (MPI) 07/01/13 - 03/31/18
NIH/NIDA

Neurobehavioral determinants of adolescent substance use and HIV/STD behaviors

This project will use a neuroeconomic approach to examine the developmental trajectories of risky decision-making in adolescents.

Role: PI

N/A Montague (PI) 05/01/11 - 04/30/18

Wellcome Trust

Computational neuroscience of social behavior and psychopathology

This award will support the development of computational models of decision-making to examine developing psychopathologies.

Role: Co-I

DP7 OD018428 Friedlander/Van Wart (MPI) 10/01/13 - 09/30/18
NIH

Mentorship and Development Program for Biomedical Trainees

This mentorship and development program will provide early development and guidance for biomedical trainees.

Role: Co-I

R01 HD074574 Ramey/DeLuca (MPI) 03/01/14 - 02/28/18
NIH/NICHD

Multisite RCT of 3 neurorehabilitation therapies for infants with asymmetrical CP.

This award will evaluate the effectiveness of constraint-induced movement therapy for infants with cerebral palsy, and use functional near infrared spectroscopy to evaluate therapy-related changes in cortical activity.

Role: Co-I

R01 MH106756 Chiu (PI) 02/01/16 - 12/31/20
NIH/NIMH

Neural substrates of reinforcement learning and its training in depression

Use neurocomputational methods to study and improve learning in depression

Role: Co-I

Completed Research Support

1 F32 MH07845 King-Casas (PI) 07/01/06 - 06/30/07
NIH/NIMH

Learning signals within an iterated social exchange

Role: PI

R21/R33 DA026086 Chiu/LaConte (PIs) 09/15/08 - 06/30/13
NIH/NIDA

Localized and distributed real-time fMRI approaches to facilitate self-control in substance abusers

This study will investigate the utility of real-time neurofeedback as a novel therapeutic approach for the treatment of nicotine abuse.

Role: Co-I

Rehabilitation Research Center of Excellence Arlinghaus/Levin (PIs) 07/01/09 – 09/30/11
VA/ORD

Neurorehabilitation: Neurons to Networks Center of Excellence
The Center of Excellence will support research on blast-related mild TBI, including neuroimaging research underlying decision-making abnormalities.

Role: Project PI

Merit D7030R King-Casas (PI) 10/01/09 – 09/30/12
VA/RR&D

Neurobehavioral assessment of interpersonal functioning in PTSD
The study will investigate neural correlates of interpersonal difficulties in OEF/OIF veterans with PTSD.
Role: PI

R01 MH091872 Chiu (PI) 06/03/10 - 03/31/16
NIH/NIMH

Neuroimaging major depression and nicotine dependence on axes of valuation
The study will identify and refine a common neurobehavioral space within which anomalies of valuation in depression and nicotine dependence may be understood.

Role: Co-I

R01 MH085496 Montague (PI) 06/15/10 - 03/21/16
NIH/NIMH

Neural economics of biological substrates of valuation
This study will use functional magnetic resonance imaging, staged social interactions, and computational theory to probe the way that humans carry out reciprocal social exchange.

Role: Co-I

R01 MH087692 Chiu (PI) 07/01/10 - 03/31/16
NIH/NIMH

Neurobehavioral metrics for the assessment and treatment of depression
This study will identify quantitative neural predictors of domain-specific response to CBT in depression.
Role: Co-I

B7760P Williams (PI) 04/01/11 – 03/31/13
VA/RR&D

Neuroimaging the impact of treatment on neural substrates of trust in PTSD
The study will investigate treatment-related changes in neural correlates of interpersonal functioning in OEF/OIF veterans with PTSD.

Role: Co-I

CDA-2 B7496W Graham (PI) 01/01/11 – 12/31/14
VA/RR&D

Identifying biologic markers for TBI recovery with fMRI and behavioral tests
This award will support mid-career development through a research project investigating recovery-related changes in neural activity and behavioral performance in OEF/OIF veterans with mTBI.

Role: Mentor

MOE2012-T2-1-051 Hong (PI) 01/01/13 - 12/31/15
Ministry of Education, Singapore / Academic Research Fund

Discovering the cognitive and neurological basis of cultural competence
This award examines the acquisition of cultural information in learning and decision-making.

Role: Collaborator

TEACHING AND ADVISINGUndergraduate student training

- 1999 - 2003 **Research Supervisor**, Department of Psychology, Harvard University. Supervised undergraduate research assistants and students conducting honors thesis research.
- 1999 - 2002 **Teaching Fellow**, Laboratory in Psychophysiology, (Psy 1856r), Harvard University.
Teaching Fellow, Psychophysiology, (Psy 1802), Harvard University.
Teaching Fellow, Mood Disorders, (Psy 1855), Harvard University.
- 2007 - 2010 **Research Supervisor**, Department of Neuroscience, Baylor College of Medicine. Supervised undergraduate project interns assisting in all aspects of research in the laboratory. (1) Magdalena Wistuba, 2007 - 2010, Rice University; (2) Sam Soundar, 2008 - 2009, Rice University; (3) Christina Brovko, Summer 2008, UC Riverside; (4) Andrew Thompson, 2008 - 2009, Rice University; (5) Betsy Ohrn, Spring 2009, Rice University; (6) Noemie Levy, Spring 2009, Rice University; (7) Allen Liao, 2009 - 2010, Rice University; (8) Jamie Sammis, 2009 - 2010, Rice University; (9) Spencer Boucher, 2009 - present, Rice University; (10) John Buikema, Summer 2009, University of Houston; (11) Yasmine Gharboui, Summer 2009, Rice University; (12) Grace Change, Summer 2010, Rice University; (13) Stephanie Reagan, Summer 2010, Harvard University.
- 2010 - present **Research Supervisor**, Department of Psychology, Virginia Tech. Supervised undergraduate project interns assisting in all aspects of research in the laboratory. (1) Erica Denfield, 2011 - 2012, Virginia Tech; (2) Kathleen McLachlan, 2011, Virginia Tech; (3) Philipp Kotlaba, 2011, Virginia Tech; (4) Joseph Koefer, 2011, Virginia Western Community College; (5) Stephanie Wiltman, 2012-13, Virginia Tech; (6) Zac Robertson, 2012, Virginia Tech; (7) Jim Pecsok, 2013, William and Mary College; (8) Kelly Kadlec, Virginia Tech.
- 2016 **Research Supervisor**, Bridges to Baccalaureate Program (NIH grant #GM107749), Virginia Tech.
Supervised underrepresented minority student seeking to transfer from community college to a four-year institution in pursuit of degree in the biomedical and behavioral sciences. (1) Justin Cox, 2016.

Post-baccalaureate student training

- 2007 - 2010 **Research Supervisor**, Department of Neuroscience, Baylor College of Medicine. Supervised college graduates in preparation for graduate study. (1) LaRaun Lindsey, 2007 - present; (2) Julie Brovko, 2007 - 2009; (3) April Sanders, 2008 - 2009; (4) James Sharp, 2009 - 2010; (5) Jessica Eiseman, 2009 - present; (6) Nina Lauharatanahirun, 2010; (7) Katherine McCurry, 2010; (8) Cristina Tortarolo, 2010; (9) Magdalena Wistuba, 2010; (10) Katherine Gardner, 2010 - 2012.
- 2008 - 2010 **Research Supervisor**, SMART PREP Apprentice (NIH grant #GM069234), Baylor College of Medicine. Supervised underrepresented minority college graduates in preparation for doctoral study. (1) Charles Carlos, Spring 2009; (2) Alexandra Acevedo-Rodriguez, 2009 - 2010.
- 2010 - present **Research Supervisor**, Department of Psychology, Virginia Tech. Supervised college graduates in preparation for graduate study. (1) Nina Lauharatanahirun, 2011; (2) Andrew Valdespino, 2011; (3) Katherine McCurry, 2011 - present; (4) Jennifer Lent, 2011 - 2012; (5) Kathleen McLachlan, 2011 - 2012; (6) Brittany Hamilton, 2011 - 2012; (7) Andre Plate, 2012 - 2014; (8) Cari Rosoff, 2013 - 2015; (9) Allison McKinnon, 2013 - present; (10) Riley Palmer, 2014 - present; (11) Lauren

Reckling, 2015 - present; (12) Chris Anzalone, 2015 - present.

Doctoral/Medical student training

- 2008 **Lecturer, University of Texas Graduate School of Biomedical Sciences.**
"Introduction to social neuroscience." (Course number GS02 0043, "Introduction to fMRI"; Course Coordinator Michael Beauchamp).
- 2009 – 2012 **Doctoral Dissertation Committee Member**
PhD candidates, Baylor College of Medicine, Dept of Neuroscience: (1) Ting Xiang, advisor Read Montague.
- 2009 **Lecturer, Baylor College of Medicine.** "Neuroimaging and social neuroscience."
(Course number 350-444, "Brain Imaging from Cell to System"; Course Coordinator Peter Saggau).
- 2011 **Lecturer, Virginia Tech Carilion School of Medicine.** (Research Domain, 1st Year
Medical Student Class; Course Coordinator Michael Friedlander).
- 2011 - present **Graduate Student Advisor,** Department of Psychology, Virginia Tech. Primary
advisor for: (1) Nina Lauharatanahirun, Biological Psychology; (2) Katherine
McCurry, Clinical; (3) Shengchuang Feng (Biological Psychology).
- 2011 - 2014 **Research Supervisor,** Virginia Tech Carilion School of Medicine.
Supervised medical students on 3-year research projects. (1) Matthew Kona; (2)
Ryan Key.
- 2012 **Lecturer, Virginia Tech.** "Valuation in social choice: Neural correlates of other-
regarding preferences." (ECON 5964, "Experimental Economics"; Course Instructor
Sheryl Ball)
- 2012 - present **Preliminary Exam Committee Member**
PhD candidates, Virginia Tech, Department of Psychology: (1) Julee Farley, advisor
Jungmeen Kim; (2) Jared McGinley, advisor Bruce Friedman; (3) Paul Hill, advisor
Rachel Diana.
- 2013 - present **Master's Thesis Committee Member**
MS candidates, Virginia Tech, Department of Psychology: (1) Vanessa Brown,
advisor Pearl Chiu; (2) Andrew Valdespino, advisor John Richey; (3) John Wang,
advisor Pearl Chiu.
- 2013 **Dissertation Committee Member**
Julee Farley, advisor Jungmeen Kim; Jared McGinley, advisor Bruce Friedman.
- 2013 **Course Director, Advanced Topics in Decision Neuroscience (Psyc 6954),**
Virginia Tech, Teaching rating: 5.3/6.
- 2013 - 2014 **Medical School Research Scholar Evaluation Committee**
Manek Aulakh
Sean Fletcher
James Light
Raeva Malik
Ryan Key
Matt Kona
Amber Post

Robbie Varipapa

- 2014, 2015 **Lecturer, Virginia Tech.** “Neuroeconomic approaches to studying psychiatric illness.” (NEUR 4984, “Neuroeconomics”; Course Instructor Sheryl Ball)
- 2015 **Course Director, Fundamentals in Neuroscience (TBMH 5014), Virginia Tech,** 8-credit intensive course.
- 2014 - present **Graduate Student Rotation Supervisor,** Translational Medicine Biology and Health, Virginia Tech. Rotation advisor for: (1) Libbie Sonnier-Netto, Neuroscience; (2) Zhuoya Cui, Neuroscience; (3) Joelle Martin, Neuroscience; (4) Mark Orloff, Neuroscience.
- 2015- present **Graduate Student Faculty Guide,** Translational Medicine Biology and Health, Virginia Tech. Faculty advisor for: (1) Randy Strauss.
- 2015 - present **Graduate Student Advisor,** Translational Medicine Biology and Health, Virginia Tech. Primary advisor for: (1) Zhuoya Cui, Neuroscience.

Postdoctoral student training

- 11/08 – 04/11 **Research Mentor,** Department of Neuroscience, Baylor College of Medicine. (1) George Christopoulos, PhD; Previously worked with Wolfram Schultz; University of Cambridge; Currently Assistant Professor at Nanyang Business School, Nanyang Technical University, Singapore.
- 06/11 – present **Research Mentor,** Virginia Tech Carilion Research Institute, Virginia Tech. (1) Jason Aimone, PhD; Previously worked with Daniel Houser; George Mason University; Currently Assistant Professor in the Department of Economics, Baylor University.
(2) Lusha Zhu, PhD; Previously worked with Ming Hsu; University of Illinois, Urbana-Champaign. Accepted tenure-track faculty position for Fall of 2015 in the Department of Psychology, Peking University.
(3) Dongil Chung, PhD; Previously worked with Jaeseung Jeong; Korea Advanced Institute for Science and Technology.

Mid-career development training

- 01/11 – present **Research Mentor,** Research Service Line, Michael E. DeBakey VA Medical Center. (1) David Graham, MD; supported under VA RR&D Career Development Award-2.

SYMPOSIA AND INVITED PRESENTATIONS

- King-Casas, B (2004). Neural correlates of reciprocity and reputation in a monetary exchange game. *Neuroeconomics*, Kiawah, SC.
- King-Casas, B (2005). Hyperscanning of trust and reciprocity. *Department of Psychiatry, University of Ulm*, Ulm, Germany.
- King-Casas, B (2005). Getting to know you: Reputation and trust in a two-person economic exchange. *Econometrics Society World Congress*, London, UK.
- King-Casas, B (2005). Functional neuroimaging of social interactions. *American Academy of Child and Adolescent Psychiatry*, Toronto, Canada.
- King-Casas, B (2005). Functional magnetic resonance imaging. *New Methods for Studying Social Behavior, Workshop Sponsored by NSF Political Science Program and Rice University*, Houston, TX.

- King-Casas, B (2005). Cooperation and defection in an iterated trust exchange. *Institute for Empirical Research in Economics, University of Zurich, Zurich, Switzerland.*
- King-Casas, B (2006). Neuroimaging the value of ideas. *DSRC Epidemiology of Ideas Workshop II, San Francisco, CA.*
- King-Casas, B (2006). Neuroimaging: Trust and the brain in BPD. *Recent Scientific and Treatment Advances in Borderline Personality Disorder, Baylor College of Medicine, Houston, TX.*
- King-Casas, B (2006). Imaging disordered cooperation in an iterated social exchange. *NSDM seminar, Department of Psychology, Princeton University, Princeton, NJ.*
- King-Casas, B (2006). Social decision making: Imaging healthy and disordered trust. *European Congress on Visual Perception, St. Petersburg, Russia.*
- King-Casas, B (2006). Betrayal and coaxing in an iterated social exchange. *Rush and Helen Record Forum, Department of Neuroscience, Baylor College of Medicine, Houston, TX.*
- King-Casas, B (2007). Behavioral and neural mechanisms of trust in individuals with borderline personality disorder. *American Psychiatric Association, San Diego, CA.*
- King-Casas, B (2007). Imaging disordered cooperation in an iterated social exchange. *Department of Neuroscience, Baylor College of Medicine, Houston, TX.*
- King-Casas, B (2007). Economic exchange in social pathologies. *Neural Basis of Reward and Punishment Meeting, Instituto Gulbenkian de Ciencia, Lisbon, Portugal.*
- King-Casas, B (2007). Imaging disordered cooperation in a two-person economic exchange. *Gatsby Computational Neuroscience Unit, University College London, London, UK.*
- King-Casas, B (2008). Imaging disordered cooperation in a two-person economic exchange. *Psychiatry Residents Seminar Series, Baylor College of Medicine, Houston, TX.*
- King-Casas, B (2009). Self-interest and the interests of others in interpersonal choice. *Social Neuroscience meets Microsociology and Neuroeconomics, Satellite Symposium, Society for Neuroscience, Chicago, IL.*
- King-Casas, B (2010). Conflict-of-interests and social value learning. *Department of Psychology, University of New Mexico, Albuquerque, NM.*
- King-Casas, B (2010). Value, motivation and learning in social dilemmas. *Brain and Cognitive Sciences Department & McGovern Institute, Massachusetts Institute of Technology, Cambridge, MA.*
- King-Casas, B (2010). Neuroimaging social behavior in borderline personality disorder. *American Psychiatric Association, New Orleans, LA.*
- Christopoulos, G, King-Casas, B (2010). Social orientation dependent learning of social outcomes. *American Psychological Society, Boston, MA.*
- King-Casas, B. (2010). Neural substrates of reciprocity in cooperative and non-cooperative interactions. *Department of Psychology, University of Aarhus, Aarhus, Denmark.*
- King-Casas, B. (2010). Value-learning in social contexts: Neural correlates of choice in social groups. *Interacting Minds Project, University of Aarhus, Aarhus, Denmark.*
- King-Casas, B. (2010). Neural correlates of social dominance in a multi-round dictator game. *Association for Behavioral and Cognitive Therapies, San Francisco, CA.*
- King-Casas, B. (2011). Value-learning in social contexts: Neural correlates of choice in social groups. *Department of Psychology, Stanford University, Palo Alto, CA.*
- King-Casas, B. (2011). Neural correlates of dominance in an iterated resource contest. *Affective Science Meeting, Stanford University, Palo Alto, CA.*
- King-Casas, B. (2011). Value-learning in social contexts: Neural correlates of choice in social groups. *Department of Psychology, University of California, Berkeley, Berkeley, CA.*

- King-Casas, B. (2011). Conflicts-of-interest in social decision-making. *Center for Mind/Brain Sciences, University of Trento, Trento, Italy.*
- King-Casas, B. (2011). Neuroeconomics of social decision-making. *Grand Rounds, Department of Psychiatry, Zucker Hillside Hospital, Glen Oaks, NY.*
- King-Casas, B. (2011), Valuation in social choice: Neural correlates of social value-learning. *ICES Experimental Economics Seminar, George Mason University, Fairfax, VA.*
- King-Casas, B, Christopoulos, G. (2011). Adding the principle of inhomogeneity to social computational neuroscience. *Organization for Human Brain Mapping, Quebec, Canada.*
- King-Casas, B. (2011). Value and risk in cooperative and competitive social dilemmas. *Nanyang Business School, Nanyang Technical University, Singapore.*
- Aimone, JA, Eiseman, J, Graham, D, Frueh, BC, McCurry, K, Chiu, P, King-Casas, B. (2011). PTSD, trust and the brain in combat veterans. *Regional Economic Science Association Conference, Tuscon, AZ.*
- Aimone, JA, Eiseman, J, Graham, D, Frueh, BC, McCurry, K, Chiu, P, King-Casas, B. (2011). Combat veterans and trust: the neuroeconomics of PTSD. *Department of Economics, Virginia Tech, Blacksburg, VA.*
- King-Casas, B. (2012). Neuroimaging social decision-making in psychiatric illness. *Grand Rounds, Department of Psychiatry and Behavioral Sciences, Virginia Tech Carilion School of Medicine, Roanoke, VA.*
- King-Casas, B. (2012). Neurometrics of social functioning in posttraumatic stress disorder. *Department of Psychology, University of Hawaii at Hilo, Hilo, HI.*
- King-Casas, B. (2012). Neuroeconomics of trust in psychiatric illness. *Department of Agricultural Economics, Virginia Tech, Blacksburg, VA.*
- King-Casas, B. (2012). *Neuroimaging interpersonal functioning in PTSD & mTBI. Mental Health Care Line, Salem VA Medical Center, Salem, VA.*
- King-Casas, B. (2012). *Neurobehavioral Assessment of Functioning in PTSD. Mental Health Care Line. Salem VA Medical Center, Salem, VA.*
- King-Casas, B. (2013). Neural computations of cooperation and aggression. *Virginia Tech Carilion Research Institute European-U.S. Workshop on the Neuroscience of Cognition, Computation, and Decisions, Lugano, Switzerland.*
- King-Casas, B. (2013). Neuroeconomic approaches to social dysfunction in PTSD. *Virginia Tech, Dept of Psychology, Clinical Research Fair.*
- King-Casas, B. (2014). Neural computations of social dominance. Keynote speaker at 4th International Conference on Neuroeconomics and Neuromanagement. Zhejiang University, Hangzhou, China.
- King-Casas, B. (2014). Neural computations of social behavior and dysfunction. Virginia Tech Carilion Research Institute.
- Zhu, L, Chiu, P, King-Casas, B (2015). Neural computations underlying actions in social hierarchy. *5th Annual Interdisciplinary Symposium on Decision Neuroscience, Cambridge, MA*

POSTER PRESENTATIONS

- King-Casas, B, Tomlin, D, Anen, C, Camerer, CF, Quartz, SR, Montague, PR (2004). Trust and reputation in a two-person economic exchange. *Society for Neuroscience, San Diego, CA.*
- King-Casas, B, Tomlin, D, Anen, C, Camerer, CF, Quartz, SR, Montague, PR (2004). Trust and reputation in a two-person economic exchange. *NIDA Workshop, Bethesda, MD.*

- King-Casas, B, Li, J, Fischbacher, U, Fehr, E, Montague, PR (2005). Neural correlates of responder competition within an Ultimatum Game. *Neuroeconomics*, Kiawah, SC.
- King-Casas, B, Tomlin, D, Anen, C, Camerer, CF, Quartz, SR, Montague, PR (2005). Getting to know you: Trust and reputation in a two-person economic exchange. *Organization of Human Brain Mapping*, Toronto, Canada.
- King-Casas, B, Li, J, Fischbacher, U, Fehr, E, Montague, PR (2005). Neural correlates of responder competition within an Ultimatum Game. *Organization of Human Brain Mapping*, Toronto, Canada.
- King-Casas, B, Sharp, C, Lomax, L, Bleiberg, E, Fonagy, P, Montague, PR (2006). Neural substrates of impulsivity within a multi-round social exchange. *NIDA Workshop, Society for Neuroscience*, Washington, D.C.
- King-Casas, B, Sharp, C, Lomax, L, Bleiberg, E, Fonagy, P, Montague, PR (2007). Neural correlates of responder competition within an Ultimatum Game. *Society for Neuroscience*, Washington, D.C.
- LaConte, S, King-Casas, B, Lisinski, J, Lindsey, L, Eagleman, DM, Cinciripini, PM, Versace, F, Chiu, PH (2009). Modulating real-time fMRI neurofeedback interfaces via craving and control in chronic smokers. *Organization for Human Brain Mapping, San Francisco, CA*.
- Chiu, P, King-Casas, B, Cinciripini, P, Versace, F, Eagleman, D, Lisinski, J, Lindsey, L, LaConte, S (2009) Real-time fMRI modulation of craving and control brain states in chronic smokers. *Society for Neuroscience, Chicago, IL*.
- Tankersley, D, Christopoulos, G, King-Casas, B, Chiu, P (2010) Punishment sensitivity predicts BOLD response to prediction errors in reward and avoidance learning. *Organization for Human Brain Mapping, Barcelona, Spain*.
- Chiu, P, Lisinski, J, King-Casas, B, Sharp, J, Eagleman, D, Versace, F, Cinciripini, P, LaConte, S (2010) Modulating “crave” and “don’t crave” brain states with real-time fMRI neurofeedback in smokers. *Organization for Human Brain Mapping, Barcelona, Spain*.
- Christopoulos G, King-Casas, B (2010) Prediction errors during social resource allocation learning depend on social value orientation. *Organization for Human Brain Mapping, Barcelona, Spain*.
- McCurry, K, Brown, G, De la Garza, R, Newton, T, Chiu, P, King-Casas, B (2010) Neural correlates of aggression in cocaine dependent individuals. *Society for Neuroscience, San Diego, CA*.
- King-Casas, B, Christopoulos, G (2010). The neurobiology of diffusion of responsibility in social dilemmas. *Society for Neuroscience, San Diego, CA*.
- Acevedo-Rodriguez, A, Christopoulos, G, Sharp, C, Fonagy, P, Montague, R, King-Casas, B (2010) Behavioral and neural correlates of trust in major depressive disorder. *Society for Neuroscience, San Diego, CA*.
- Eiseman, J, Graham, D, Frueh, BC, Kosten, T, Chiu, P, King-Casas, B (2010) Neural substrates of interpersonal function in post-traumatic stress disorder. *Society for Neuroscience, San Diego, CA*.
- Lindsey, L, McCurry, K, Patel, HR, LaConte, S, De la Garza, R, Newton, T, King-Casas, B, Chiu, PH (2010) Neural substrates of drug use, craving, and executive control in cocaine users. *Society for Neuroscience, San Diego, CA*.
- Christopoulos, G, King-Casas, B (2010) Behavioral and neuronal mechanisms underlying reinforcement learning of social stimuli. *Society for Neuroscience, San Diego, CA*.
- Tankersley, D, McCurry, K, Newton, T, De la Garza, R, Christopoulos, G, King-Casas, B, Chiu, P (2010) Reward and punishment learning associated with differential response to positive and negative prediction errors in stimulant-dependent subjects. *Society for Neuroscience, San Diego, CA*.
- Lindsey, LD, Eiseman, J, Graham, D, Frueh, B, Kosten, T, King-Casas, B, Chiu, PH (2010) Neuroimaging affective phenotypes in depression and post-traumatic stress disorder. *Society for Neuroscience, San Diego, CA*.

- McCurry, K, Lauharatanahirun, N, De La Garza, R, Newton, T, Chiu, P, King-Casas, B (2011) Neurobehavioral effects of cocaine use in a social dominance task. *Organization for Human Brain Mapping, Quebec, Canada.*
- Lauharatanahirun, N, Christopoulos, G, Regan, S, King-Casas, B (2011) Neural correlates of risk and ambiguity in a social decision-making. *Organization for Human Brain Mapping, Quebec, Canada.*
- Gordon, D, McCurry, K, King-Casas, B, Chiu, P (2011) People's addiction to people: Quantifying trust in interpersonal relationships. *McNair Scholars Summer Research Program Conference, Virginia Tech, Blacksburg, VA.*
- Kennedy, W, Lauharatanahirun, N, McCurry, K, Chiu, P, King-Casas, B (2011) The effects of risk preference on risk pooling. *McNair Scholars Summer Research Program Conference, Virginia Tech, Blacksburg, VA.*
- Lauharatanahirun, N, Christopoulos, G, Regan, S, King-Casas, B (2011) Behavioral and neural mechanisms of risk in social decision-making. *Society for Neuroscience, Washington, DC.*
- McCurry, K, Eiseman, J, Gardner, K, Chiu, P, Williams, W, King-Casas, B (2011) Impact of group psychotherapy on neural correlates of trust in veterans with PTSD. *Society for Neuroscience, Washington, DC.*
- Williams, W, Eiseman, J, McCurry, K, Chiu, P, King-Casas, B (2011) The effectiveness of group psychotherapy in improving trust in veterans with PTSD. *International Society for Traumatic Stress Studies, Baltimore, MD.*
- Aimone, JA, Ball, S, King-Casas, B. (2012) Anxiety, betrayal aversion, and the growth of interpersonal trust. Poster, North-American Economic Science Association Conference, Tucson, AZ.
- Aimone, J, McCurry, K, McNamara, R, Frueh, B, Chiu, P, King-Casas, B (2012) Neural substrates of interpersonal dysfunction in PTSD: Trust without reward. Poster, Society for Neuroscience, New Orleans, LA.
- Aimone, J, McCurry, K, McNamara, R, Frueh, B, Chiu, P, King-Casas, B (2012) Neural substrates of interpersonal dysfunction in PTSD: Trust without reward. Poster, Human Brain Mapping, Beijing, China.
- McCurry, K, Lindsey, L, McNamara, R, LaConte, S, Frueh, B, King-Casas, B, Chiu, P (2012) Brain state classification of PTSD and comorbid conditions using neural responses to emotional images. Poster, Society for Neuroscience, New Orleans, LA.
- Wang, J, Zhu, L, Tankersley, D, De LaGarza, R, Newton, T, McCurry, K, King-Casas, B, Chiu, P (2012) Neural substrates of learning and valuation in cocaine dependent individuals. Poster, Society for Neuroscience, New Orleans, LA.
- Wang, J, Zhu, L, Tankersley, D, Christopoulos, G, King-Casas, B, Chiu, P (2012) The interaction of feedback and context on learning preferences. Poster, Organization for Human Brain Mapping, Beijing, China.
- Zhu, L, Chiu, P, King-Casas, B (2012) Neural computations underlying actions in social hierarchy. Poster, Society for Neuroscience, New Orleans, LA.
- Zhu, L, Chiu, P, King-Casas, B (2012). Neural computations underlying actions in social hierarchy. Presentation, D-CIDES Regional Conference, Durham, NC.
- Zhu, L, Chiu, P, King-Casas, B (2012). "Neural mechanisms of social learning in an iterated resource competition. Poster, National Academy of Sciences - Kavli Frontiers of Science Symposium, Irvine, CA.
- Aimone, J, Williams, McCurry, K, Frueh, B, Graham, D, Chiu, P, King-Casas, B (2013) The influence of cognitive processing therapy upon remediation of neural social prediction error signaling in PTSD. Poster, Society for Neuroscience, New Orleans, LA.

- Brown, V, Wang, J, Zhu, L, McNamara, R, Rosoff, C, McCurry, K, King-Casas, B, Chiu, P (2013) The neural substrates of reward and punishment learning in major depression. Poster, Organization for Human Brain Mapping, Seattle, WA.
- Chiu, P, Lisinski, J, Plate, A, King-Casas, B, Eagleman, D, Cinciripini, P, LaConte, S (2013) Modulating 'crave' and 'don't crave' brain states using real-time fMRI neurofeedback. Poster, Organization for Human Brain Mapping, Seattle, WA.
- Chung, D, Christopoulos, G, Newton, T, De La Garza, R, King-Casas, B, Chiu, P (2013) Cocaine addicts show increased susceptibility to social influence during risky decision making. Poster, Society for Neuroscience, New Orleans, LA.
- Jenkins, A, Zhu, L, Set, E, Scabini, D, Knight, R, Chiu, P, King-Casas, B, Hsu, M (2013) Dissociable neural mechanisms underlying honesty and altruism. Poster, Society for Neuroscience, New Orleans, LA.
- Lauharatanahirun, N, Kim-Spoon, J, Walters, J, Farley, J, Deater-Deckard, K, Bickel, W, Chiu, P, King-Casas, B (2013) The interaction of reward sensitivity and executive function predicts substance use and neural signature of risk processing in adolescents. Poster, Society for Neuroscience, New Orleans, LA.
- Zhu, L, Rosoff, C, McNamara, R, McCurry, K, Chiu, P, King-Casas, B (2013) Aggression in social contests in veterans with post-traumatic stress disorder. Poster, Organization for Human Brain Mapping, Seattle, WA.
- Zhu, L, Rosoff, C, McCurry, K, Frueh, B, Chiu, P, King-Casas, B (2013) Aggression in social contests in veterans with post-traumatic stress disorder. Poster, Society for Neuroscience, New Orleans, LA.
- Zhu, L, Set, E, Hsu, M, Ball, S, Chiu, P, King-Casas, B. (2013) The value of honesty: Neural evidence for lie-averse preferences. Poster, Society for Neuroscience, New Orleans, LA.
- Brown, V, Wang, J, Zhu, L, King-Casas, B, Chiu, P (2014) Disrupted reinforcement learning in posttraumatic stress disorder. Poster, Organization for Human Brain Mapping, Hamburg, Germany.
- Chung, D, Aimone, J, Nguyen, L, McKinnon, A, Plate, A, King-Casas, B, Chiu, P (2014) Neural substrates of trust and diminishing motivations of generosity. Poster, Organization for Human Brain Mapping, Hamburg, Germany.
- Lauharatanahirun, N, Kim-Spoon, J, Chiu, P, King-Casas, B (2014). Neural correlates of risk processing and expectation of uncertainty in adolescents. Poster, Organization for Human Brain Mapping, Hamburg, Germany.
- McCurry, K, Lisinski, J, LaConte, S, Chiu, P, King-Casas, B (2014) Development of a group affective brain model for use in real-time fMRI. Poster, Organization for Human Brain Mapping, Hamburg, Germany.
- Wang, J, Zhu, L, De La Garza, R, Newton, T, McCurry, K, King-Casas, B, Chiu, P (2014) Cocaine use modulates neurobehavioral substrates of loss aversion in a probabilistic learning task. Poster, Organization for Human Brain Mapping, Hamburg, Germany.
- Brown, V, Wang, J, Zhu, L, Rosoff*, C, King-Casas, B, Chiu, P (2014) Reinforcement learning predictors of response to CBT in depression. Poster, Association for Behavioral and Cognitive Therapies, Philadelphia, PA.
- Nagrani, S, Chung, D, Chiu, P (2014) A study of risky decision-making in major depressive disorder. Poster, Society for Judgment and Decision Making, Long Beach, CA.
- Lauharatanahirun, N, Ball, S, Aimone, J, Chiu, P, Kim-Spoon, J, King-Casas, B (2015) Neuroeconomic predictors of health risk behaviors in adolescents. Poster, Organization for Human Brain Mapping, Honolulu, Hawaii.
- Chung, D, De La Garza, R, Newton, T, McCurry, K, King-Casas, B, Chiu, P (2015) Neurobehavioral evidence for cognitive enhancement in cocaine dependent individuals. Poster, Organization for Human Brain Mapping, Honolulu, Hawaii.

- Kim-Spoon, J, Chiu, P, Deater-Deckard, K, Farley, J, Lauharatanahirun*, N, Bickel, W, King-Casas, B (2015) A neurobehavioral study of the interaction between risk sensitivity and cognitive control predicting adolescent risk taking. Society for Research on Child Development, Philadelphia, PA.
- Kim-Spoon, J, Kahn, R, Faris, K, Deater-Deckard, K, Chiu, P, King-Casas, B (2015). The association between laboratory risky decision-making and real-life health risk behaviors among adolescents and adults. Society for Research on Child Development, Philadelphia, PA.
- Kahn, R, Kim-Spoon, J, Deater-Deckard, K, Chiu, P, King-Casas, B (2015). An examination of the interaction between risk sensitivity and inhibitory control related to young adults' substance use. Society for Research on Child Development, Philadelphia, PA.
- Zhu, L, Wang, J, Ball, S, Hsu, M, Chiu, P, King-Casas, B (2015). The value of honesty: Neural evidence for lie-averse preferences. 5th Annual Interdisciplinary Symposium on Decision Neuroscience, Cambridge, MA.
- Chung, D, Christopoulos, G, King-Casas, B, Ball, S, Chiu, P (2015). Others' choices increase subjective value and explain asymmetric alignment with safety and risk. 5th Annual Interdisciplinary Symposium on Decision Neuroscience, Cambridge, MA.