

**PEARL H. CHIU, PhD**  
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**EDUCATION AND EMPLOYMENT**

Professor            **Virginia Tech Department of Psychology (with tenure), Blacksburg VA; Fralin Biomedical Research Institute at VT Carilion**  
07/2023 - present

Associate Professor   **Virginia Tech Department of Psychology (with tenure), Blacksburg VA; Fralin Biomedical Research Institute at VT Carilion**  
07/2016 - 06/2023

Assistant Professor   **Virginia Tech Department of Psychology, Blacksburg VA; Virginia Tech Carilion Research Institute & School of Medicine, Roanoke VA**  
12/2010 - 06/2016

Assistant Professor   **Virginia Tech Carilion School of Medicine, Department of Psychiatry and Behavioral Medicine, Roanoke VA**  
12/2010 - present

Research Scientist   **Salem Veterans Affairs Medical Center, Salem VA**  
2011 - present

Assistant Professor   **Baylor College of Medicine, Department of Neuroscience and Menninger Department of Psychiatry and Behavioral Sciences (Adjunct 2011 - 2013); Michael E. DeBakey Veterans Affairs Medical Center (Research Scientist)**  
2007 - 2010

Post-doc Fellow      **Baylor College of Medicine, Department of Neuroscience**  
2006 - 2007            Human Neuroimaging Lab (PI: Read Montague, PhD)

PhD                    **Harvard University, Cambridge, MA**  
2006                    Field: Psychology (Clinical Science)

Clinical Intern        **Baylor College of Medicine, Menninger Department of Psychiatry & Behavioral Sciences, Houston, TX (Adult Neuroscience Track; APA Accredited Internship)**  
2005 - 2006

AM                     **Harvard University, Cambridge, MA**  
2004                    Field: Psychology

Lab Coordinator      **Harvard University, Cambridge, MA**  
1998 - 2000            Interpersonal Perception and Communication Lab (PI: Nalini Ambady, PhD)

AB                      **Harvard University, Cambridge, MA**  
1998                    Field: Psychology and Biology, Track in Cognitive Neuroscience

**AWARDS AND HONORS**

2023 - 2026            **Patricia Caldwell Faculty Fellow, College of Science, Virginia Tech**  
2022                    **Virginia Tech Graduate School, College of Science Outstanding Mentor Award**  
2022, 2023            **Virginia Tech Research and Innovation Excellence Recognition**  
2015                    **National Public Radio, Source of the Week**

- 2012 **Virginia Tech Scholar of the Week**, April 9
- 2010 **Biobehavioral Research Award for Innovative New Scientists (BRAINS)**, National Institute of Mental Health
- 2006 - 2007 **American Psychological Association Diversity in Neuroscience Postdoctoral Fellowship**
- 2004 - 2005 **Dissertation Completion Merit Fellowship**, Harvard University
- 2003 - 2004 **Harvard University Graduate Society Dissertation Merit Fellowship**
- 2001 - 2002 **Fellowship in Psychobiology**, Harvard University. Distinction for interdisciplinary research
- 2001 **Bok Certificate of Distinction in Teaching**, Harvard University. 4.9/5.0 teaching rating
- 2001 **Vincent Prize**, Harvard University. For Innovative Ideas for the Awareness & Treatment of Depression
- 2000 - 2001 **Stimson Prize for Research**, Harvard University
- 1998 **John Harvard Certificate of Merit**. University recognition of academic merit
- 1998 **Certificate in Mind, Brain, Behavior**. University recognition of interdisciplinary research

#### PEER-REVIEWED PAPERS

# trainee co-author

- Brown, VM#, Lee, J, Wang, JM, Casas, B, Chiu, PH (in press) Reinforcement learning-informed queries guide behavioral change. *Clinical Psychological Science*.
- Hunt, C, Casas, B, Chiu, PH, Smith, LJ, Priorello, L, Lee, K, Etsey, M, Newsome, MR, Williams, MW (in press) Pretreatment characteristics associated with symptom reduction during group cognitive processing therapy versus exposure therapy for PTSD: An exploratory study of Veterans. *Cognitive Behaviour Therapy*.
- Bang, D, Luo, Y, Barbosa, LS, Batten, SR, Hadj-Amar, B, Twomey, T, Melville, N, White, JP, Torres, A, Celaya, J, Ramaiah, P, McClure, SM, Brewer, GA, Bina, RW, Lohrenz, T, Casas, B, Chiu, PH, Vannucci, M, Kishida, KT, Witcher, MR, Montague, PR (2023) Noradrenaline tracks emotional modulation of attention in human amygdala. *Current Biology*. Online ahead of print: <https://doi.org/10.1016/j.cub.2023.09.074>
- Williams, W, King-Casas, B, Chiu, PH, Sciarrino, N, Estey, M, Hunt, C, McCurry, K, Graham, D (2022) Do early responders and treatment non-responders offer guidance to make cognitive processing therapy (CPT) group a more effective treatment? *Journal of Clinical Psychology*, 78, 1376-1387. <https://doi.org/10.1002/jclp.23307>
- Brown VM#, Zhu L#, Solway A#, Wang, JM#, McCurry, KL#, King-Casas, B, Chiu, PH (2021) Reinforcement learning disruptions in individuals with depression and sensitivity to symptom change following cognitive behavioral therapy. *JAMA Psychiatry*, 78, 1113-1122. <https://doi.org/10.1001/jamapsychiatry.2021.1844>
- Chung, D#, Orloff, M#, Lauharatanahirun, N#, Chiu, PH, King-Casas, B (2020) Valuation of peers' safe choices is associated with substance-naïveté in adolescents. *Proceedings of the National Academy of Sciences, USA*, 117, 31729-31737. <https://doi.org/10.1073/pnas.1919111117>
- Williams, MW, Graham, D, Sciarrino, NA, Estey, M, McCurry, K#, Chiu, PH, King-Casas, B (2020) Does validity measure response affect group cognitive processing therapy (CPT) outcomes in veterans with PTSD? *Military Medicine*, 185, e370-e376. <https://doi.org/10.1093/milmed/usz385>
- McCurry, KM#, Frueh, BC, Chiu, PH, King-Casas, B (2020) Opponent effects of hyperarousal and reexperiencing on affective habituation in posttraumatic stress disorder. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 5, 203-212. <https://doi.org/10.1016/j.bpsc.2019.09.006>

Commentary in: Averill CL, Averill LA, Fan S, Abdallah CG (2020) Of forests and trees: Bridging the gap between neurobiology and behavior in posttraumatic stress disorder. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 5, 135-137.

Wang, JM<sup>#</sup>, Zhu, L<sup>#</sup>, Brown, VM<sup>#</sup>, De La Garza II, R, Newton, T, King-Casas, B, Chiu, PH (2019) In cocaine dependence, neural prediction errors during loss avoidance are increased with cocaine deprivation and predict drug use. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 4, 291-299. <https://doi.org/10.1016/j.bpsc.2018.07.009>

Commentary in: Stewart, JL (2019). A computational modeling approach supports negative reinforcement theories of addiction. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 4, 218-219.

Brown, V<sup>#</sup>, Zhu, L<sup>#</sup>, Wang, J<sup>#</sup>, Frueh, BC, King-Casas, B, Chiu, PH (2018). Associability-modulated loss learning is increased in posttraumatic stress disorder. *eLife*. eLife 2018;7:e30150. <https://doi.org/10.7554/eLife.30150>

Commentary in: <https://doi.org/10.7554/eLife.30150.002>

Kahn RE, Chiu PH, Deater-Deckard K, Hochgraf AK, King-Casas B, Kim-Spoon J (2018). The interaction between punishment sensitivity and effortful control for emerging adults' substance use behaviors. *Substance Use and Misuse*, 53, 1299-1310. <https://doi.org/10.1080/10826084.2017.1407790>

Chung, D<sup>#</sup>, Kadlec, K<sup>#</sup>, Aimone, J, McCurry, K<sup>#</sup>, King-Casas, B, Chiu, PH (2017). Valuation in major depression is intact and stable in a non-learning environment. *Scientific Reports*, 7, 44374. <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. <https://doi.org/10.1016/j.neuropsychologia.2017.04.020>

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. <https://doi.org/10.1016/j.neuropsychologia.2016.08.028>

Kim-Spoon, J, Kahn, R<sup>#</sup>, 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, 58 - 63. <https://doi.org/10.1177/0165025415577825>

Chung, D<sup>#</sup>, Christopoulos, G<sup>#</sup>, King-Casas, B, Ball, S, Chiu, PH (2015). Social signals of safety and risk confer utility and have asymmetric effects on observers' choices. *Nature Neuroscience*, 18, 912 - 916. <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.

Marsden, KE<sup>#</sup>, Ma, WJ, Deci, EL, Ryan, RM, Chiu, PH (2015). Diminished neural responses predict enhanced intrinsic motivation and sensitivity to external incentive. *Cognitive, Affective, & Behavioral Neuroscience*, 15, 276 - 286. <https://doi.org/10.3758/s13415-014-0324-5>

Williams, W, Graham, D, McCurry, K<sup>#</sup>, 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. <https://doi.org/10.1521/bumc.2014.78.4.335>

Zhu, L<sup>#</sup>, 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 - 1321. <https://doi.org/10.1038/nn.3798>

- White, SW, Mazefsky, CA, Dichter, GS, Chiu, PH, Richey, JA, Ollendick, TH (2014). Social-cognitive, physiological, and neural mechanisms underlying emotion regulation impairments: Understanding anxiety in autism spectrum disorder. *International Journal of Developmental Neuroscience*, 39, 22 - 36. <https://doi.org/10.1016/j.ijdevneu.2014.05.012>
- King-Casas, B & Chiu, PH (2012). Understanding social function in psychiatric illness through multi-player economic games. *Biological Psychiatry*, 72, 119-125. <https://doi.org/10.1016/j.biopsych.2012.03.033>
- D'Andrea, W<sup>#</sup>, Chiu, PH, Casas, BR, & Deldin, P (2012). Linguistic predictors of post-traumatic stress disorder symptoms following 11 September 2001. *Applied Cognitive Psychology*, 26, 316-323. <https://doi.org/10.1002/acp.1830>
- Tso, IF<sup>#</sup>, Chiu, PH, King-Casas, BR, Deldin P (2011). Alterations in affective processing of attack images following September 11, 2001. *Journal of Traumatic Stress*, 24, 538-545. <https://doi.org/10.1002/jts.20678>
- Herman, S, Archambeau, OG<sup>#</sup>, Deliramich, AN<sup>#</sup>, Kim, BSK, Chiu, PH, Frueh, BC (2011). Depressive symptoms and mental health treatment in an ethn racially diverse college student sample. *Journal of American College Health*, 59, 715-720. <https://doi.org/10.1080/07448481.2010.529625>
- Lindsey, L<sup>#</sup>, King-Casas, B, Brovko, J, Chiu, PH (2009). Toward functional neurobehavioral assessment of mood and anxiety. *Conference Proceedings of the IEEE Engineering in Medicine and Biology Society*, 2009, 5393-5396 <https://doi.org/10.1109/IEMBS.2009.5332809>
- Chiu, PH, Holmes, AJ, Pizzagalli, DA (2008). Dissociable recruitment of rostral anterior cingulate and inferior frontal cortex in emotional response inhibition. *NeuroImage*, 42, 988-997. <https://doi.org/10.1016/j.neuroimage.2008.04.248>
- Chiu, PH, Lohrenz, TM, Montague, PR (2008). Smokers' brains compute but ignore a fictive error signal in a sequential investment task. *Nature Neuroscience*, 11, 514-520. <https://doi.org/10.1038/nn2067>
- Chiu, PH, Kayali, MA, Kishida, KT, Tomlin, D, Klinger, LG, Klinger, MR, Montague, PR (2008). Self responses along cingulate cortex reveal quantitative neural phenotype for high functioning autism. *Neuron*, 57, 463-473. [cover article] <https://doi.org/10.1016/j.neuron.2007.12.020>
- Commentary in: Frith, CD & Frith U (2008). The self and its reputation in autism. *Neuron*, 57, 331-332.
- Chiu, PH & Deldin, P (2007). Neural evidence for enhanced error detection in major depressive disorder. *American Journal of Psychiatry*, 164, 608-616. <https://doi.org/10.1176/ajp.2007.164.4.608>
- Commentary in: Oquendo, MA & Parsey, RV (2007). What have we learned about the neurobiology of major depression? *American Journal of Psychiatry*, 164, 540-542.
- Deldin, P & Chiu, P (2005). Cognitive restructuring and EEG in major depression. *Biological Psychology*, 70, 141-151. <https://doi.org/10.1016/j.biopsycho.2005.01.003>
- Chiu, P, Ambady, N, & Deldin, P (2004). CNV to emotional in- and out-group stimuli differentiates high- and low- prejudiced individuals. *Journal of Cognitive Neuroscience*, 16, 1030-1039. <https://doi.org/10.1162/0898929042947946>

#### CHAPTERS, COMMENTARY, AND SCIENTIFIC OUTREACH PUBLICATIONS

- Chiu, PH & King-Casas, B (2021) Can peer pressure help teens make safer decisions? *Science Journal for Kids*. <https://www.sciencejournalforkids.org/articles/can-peer-pressure-help-teens-make-safer-decisions/>
- Li, F<sup>#</sup>, Chiu, PH, King-Casas, B (2021). Trust vs Reciprocity: The role of outcome-based and belief-based motivations. In Krueger, F (Ed.), *The Neurobiology of Trust* (pp. 236-268). Cambridge, UK: Cambridge University Press. <https://doi.org/10.1017/9781108770880.014>

- Montague, PR & Chiu, PH (2009). Brain reward and fMRI. In Charney, D. and Nestler, E. (Eds.), *Neurobiology of Mental Illness* (pp. 846-866). New York NY: Oxford University Press.
- Montague, PR & Chiu, PH (2007). For goodness' sake. [News and Views] *Nature Neuroscience*, 10, 137-138. <https://doi.org/10.1038/nn0207-137>
- Ambady, N, Chiao, J, Chiu, P, & Deldin, P (2005). Race and emotion: insights from a social neuroscience perspective. In JT Cacioppo, PS Visser, CL Pickett (Eds.), *Social Neuroscience: People Thinking About People*. (pp. 209-228). Cambridge MA: MIT Press.
- Deldin, P, Shestyuk, A, & Chiu, P (2003). ERP indices of memory biases in depression. In M. Lenzenweger and J. Hooley (Eds.), *Principles of Experimental Psychopathology* (pp. 195-210). Washington, D.C.: APA. <https://doi.org/10.1037/10477-012>

## RESEARCH FUNDING

### Current support

#### PI or MPI

- |  |                       |                   |
|--|-----------------------|-------------------|
| NIH/NIMH R01MH122512   | Chiu, Montague (MPIs) | 07/2022 - 03/2027 |
| Title: Sub-second neurochemistry of error signals and affective processing in depression   |                       |                   |
| Goal: Test dopamine and serotonin correlates of depression symptoms  |                       |                   |
| NIH/NIAAA R01AA029222  | Chiu (PI)             | 09/2021 - 05/2026 |
| Title: Making connections among social ties, neural sensitivity to social signals, and outcomes  |                       |                   |
| Goal: Test whether sensitivity to social signals influences how social ties yield variability in alcohol use and mood/anxiety outcomes |                       |                   |
| NIH/NIMH R01MH127773   | Chiu (PI)             | 07/2021 - 06/2026 |
| Title: Evaluating neurocomputational loss and reward elements of the RDoC matrix   |                       |                   |
| Goal: Assess structural relationships and stability among valuation processes and psychopathology symptoms                             |                       |                   |
| NIH/NIDA R01DA051573   | Chiu, Casas (MPIs)    | 04/2021 - 03/2026 |
| Title: Social influences on choices in adolescent substance use  |                       |                   |
| Goal: Examine neurobehavioral substrates of how social peers impact choices in adolescents   |                       |                   |

Completed support available upon request.

## SCIENTIFIC REVIEW AND SERVICE

### National service

#### National Institutes of Health (NIH)

- |                |   |
|----------------|---|
| 2022 - present | Member, Neural Basis of Psychopathology, Addictions and Sleep Disorders Study Section, NIH Center for Scientific Review |
|----------------|---|

#### National Scientific Review Panels

- |      |  |
|------|--|
| 2021 | NIMH. ZMH1 ERB-S (07), review for applications to RFA-MH-21-116 and -117, Mood Disorders in People Living with HIV: Mechanisms and Pathways (R21 and R01)      |
| 2021 | National Institute of General Medical Sciences (NIGMS), review for applications to PAR-19-313, Centers of Biomedical Research Excellence (COBRE) Phase 1 (P20) |

- 2021 NIMH. ZMH1 ERB-Q (01), review for applications to PAR-20-093 (Silvio O. Conte Centers for Neuroscience and Translational Mental Health Research (P50)
- 2020 NIMH. ZMH1 ERB-Q (08), review for applications to PA-19-090 and PA-19-130, NIH Pathway to Independence Award (K99/R00)
- 2020 NIMH. ZMH1 ERB-Q (01), review for applications to RFA-MH-20-525, NIMH Biobehavioral Research Awards for Innovative New Scientists (NIMH BRAINS R01)
- 2019 NIMH. ZMH1 ERB-D (04), review for applications to RFA-MH-18-704 Development of Psychosocial Therapeutic and Preventive Interventions for Mental Disorders (R61/R33)
- 2019 NIMH. Chair, ZMH1 ERB-S (04), review for applications to RFA-MH-19-240 Computationally-defined behaviors in psychiatry (R21)
- 2018 NIMH. ZMH1 ERB-M (04), review for applications to PA-18-398, NIH Pathway to Independence Award (Parent K99/R00)
- 2017 NIH Center for Scientific Review (CSR). November ZRG1 BDCN-J (02), Special Emphasis Panel. Member Conflict: Addictions, Depression, Bipolar Disorder, Schizophrenia
- 2017 NIH CSR. June ZRG1 BDCN-J (02), Special Emphasis Panel. Member Conflict: Addictions, Depression, Bipolar Disorder, Schizophrenia
- 2017 NIMH. ZMH1 ERB-L (02), review for applications to RFA-MH-16-600 NIMH Biobehavioral Research Awards for Innovative New Scientists (NIMH BRAINS R01)
- 2017 Department of Veterans Affairs MHBB 1 - Mental Health and Behavioral Science B Merit Review Panel.
- 2016 NIMH. ZMH1 ERB-M (05), review for applications to PA-16-077, NIH Pathway to Independence Award (K99/R00)
- 2016 NIMH. ZMH1 ERB-M (01), review for applications to PA-16-193, NIH Pathway to Independence Award (K99/R00)
- 2015 NIMH. ZMH1 ERB-S (01), review for applications to PA-15-083, NIH Pathway to Independence Award (K99/R00)
- 2015 NIMH. ZMH1 ERB-D (01), review for applications to RFA-MH-16-400, Exploratory Clinical Trials of Novel Interventions for Mental Disorders (R33)
- 2013 NIMH. ZMH1 ERB-S (02), review for applications to RFA-MH-14-030, Advancing Eating Disorders Research through Dimensional Studies of Biology and Behavior (R01)
- 2013 NIMH. ZMH1 ERB-L (04), review for applications to RFA-MH-13-110 Biobehavioral Research Awards for Innovative New Scientists (BRAINS R01)
- 2013 National Institute on Drug Abuse (NIDA). ZDA1 MXL-F (08), review for applications to RFA-NS-13-007 Exceptional Unconventional Research Enabling Knowledge Acceleration (EUREKA) for Neuroscience and Disorders of the Nervous System (R01)
- 2012 NIMH. ZMH1 ERB-S (04), review for applications to RFA-MH-12-100 Dimensional Approaches to Research Classification in Psychiatric Disorders (RDoC R01)
- 2011 NIMH. ZMH1 ERB - (L04), review for applications to RFA-MH-11-050 Biobehavioral Research Awards for Innovative New Scientists (BRAINS R01)

### **International service**

- 2020 Reviewer, Netherlands Organisation for Health Research and Development
- 2020 Reviewer, Health Research Council of New Zealand
- 2019 Reviewer, Wellcome Trust, UK
- 2014 Reviewer, Swiss National Science Foundation

### **Editorial service**

Editorial Board Member, Scientific Reports (2018 - present)

Review Editor in Computational Psychiatry, Frontiers in Psychiatry (2018 - present)

Editorial Board Member, Computational Psychiatry, MIT Press (2015 - 2020)

### **Ad Hoc Reviewer**

Archives of General Psychiatry; Autism Research; Biological Psychiatry; Biological Psychiatry: Cognitive Neuroscience and Neuroimaging; Biological Psychology; Computational Psychiatry; Cognitive, Affective, and Behavioral Neuroscience; Emotion; Experimental Biology & Medicine; Health Psychology; Human Brain Mapping; Journal of Cognitive Neuroscience; Journal of Psychiatric Research; Nature Neuroscience; Neural Computation; NeuroImage; Neuron; Neuropsychologia; Neuroscience; Psychiatry Research: Neuroimaging; PLOS Computational Biology; PNAS; Psychophysiology; Science; Scientific Reports; Conference Proceedings for Organization for Human Brain Mapping; Conference Proceedings for the Multi-disciplinary Conference on Reinforcement Learning and Decision Making.

### **University service**

#### **Virginia Tech**

#### **University service**

Search Committee Member, Director of Human Research Protection Program (2018)

Adaptive Brain and Behavior Steering Committee (2016 - 2019)

Center for Autism Research Steering Committee Member (2012 - 2017)

#### **College of Science service**

Steering Committee, COS Faculty Association, Psychology Representative (2021 - present)

Promotion & Tenure Committee, elected COS member-at-large (2020 - 2022)

Faculty Search Committee, Adaptive Brain & Behavior Destination Area, Neuroscience (2012 - 2013, 2015 - 2016)

Undergraduate Scholarship Reviewer (2015)

#### **Department of Psychology service**

Faculty Search Committee, Cognitive Neuroscience and Biopsychology area (2023)

Faculty Search Committee, Clinical Science area (2022; two positions)

Executive Committee (2021 - 2023)

Faculty Search Committee, Clinical Science area (2021; three positions)

Awards Committee, Clinical Science area (2021 - present)

Personnel (Promotion & Tenure) Committee (2019 - 2020; 2023 - present)

Faculty Search Committee, Developmental Science area (2017 - 2018)

Diversity Committee (2016 - 2019)

Scholarly Productivity Committee, Clinical Science area (2012 - 2018; 2020 - 2021)

Member, Clinical Science graduate training area faculty (2011 - present)

Member, Biological Psychology graduate training area faculty; area renamed Cognitive Neuroscience and Biopsychology in 2023 (2011 - present)

#### **Fralin Biomedical Research Institute at Virginia Tech Carilion service**

Faculty Search Committee, Health Behaviors Research for Cancer Prevention (2023)  
International Precision Neuroscience Conference, Organizing Committee (2020 - 2022)  
Postdoctoral Advancement Committee (2021 - present)  
Faculty Search Committee, Computational Neuroscience (2017, 2018, 2020, 2021)  
Distinguished Visiting Scholar Seminar Series Committee (2011, 2012, 2017, 2018)  
Faculty Search Committee, Health Behaviors (2017 - 2018)  
Faculty Search Committee, VTC School of Medicine, Neurology Department Chair (2017)  
Carilion Clinic Research Committee (2012 - 2013)  
Faculty Search Committee, Cardio/Cerebrovascular (2011)

### **Baylor College of Medicine**

Member, Translational Biology & Molecular Medicine Graduate Program (2010)  
Executive Committee, Neuroscience Graduate Program (2010)  
Committee on Graduate Admissions (2009)  
Seminar Series Committee (2008)  
Group to define student competencies in quantitative skills (2007 - 2008)  
Department of Neuroscience, Computational/Cognitive Faculty Search Committee (2006 - 2008)

### **TEACHING AND MENTORING**

#### **Postdoctoral trainees**

- (1) Leonardo Barbosa, PhD (postdoc 2022 - current; PhD, 2016, Paris Sciences et Lettres - École Normale Supérieure)
- (2) Dong-Youl Kim, PhD (postdoc 2021 - current; PhD, 2021, Korea University)
- (3) John Wang, PhD (postdoc 2020 - current; PhD, 2020, Virginia Tech)
- (4) Flora Li, PhD (PhD, 2019, Virginia Tech); postdoc 2019 - 2021; now tenure track Assistant Professor at Nanjing Audit University, China.
- (5) Lusha Zhu, PhD (PhD, 2011, University of Illinois at Urbana-Champaign); postdoc 2012 - 2016; now tenure track Assistant Professor of Psychology and McGovern Institute, Peking University, China
- (6) Dongil Chung, PhD (PhD, 2011, Korea Advanced Institute for Science and Technology); postdoc and Research Scientist 2011 - 2016; now tenure track Assistant Professor, Ulsan National Institute of Science and Technology, South Korea
- (7) Cameron Craddock, PhD (PhD, 2009, Georgia Institute of Technology); post-doctoral mentor on NARSAD Young Investigator Award 2010 - 2013; co-founder The NeuroBureau; Director of the Computational Neuroimaging Lab, The University of Texas at Austin Dell Medical School
- (8) George Christopoulos, PhD (PhD, 2008, Cambridge University); postdoc 2008 - 2011; now Associate Professor with tenure at Nanyang Business School, Nanyang Technical University, Singapore
- (9) Dharol Tankersley, PhD (PhD, 2008, Duke University); postdoc 2009 - 2011; now Engineer at P2 Energy Solutions

#### **Graduate student training**

##### **Doctoral students as primary or co-primary mentor, Virginia Tech**

- (1) Shuhan Wang (current, Psychology; Biological Psychology Program, PhD expected 2027)
- (2) Kelsey Winkeler (current, Psychology; Clinical Science Program, PhD expected 2027)
- (3) Shivani Goyal (current, Psychology; Clinical Science Program, PhD expected 2027)
- (4) Vansh Bansal (current, Psychology; Clinical Science Program, PhD expected 2026)
- (5) Gates Palissery (current, Translational Biology, Medicine, and Health; PhD expected 2025)
- (6) Natalie Melville (current, Translational Biology, Medicine, and Health; PhD expected 2025)



- (7) Mark Orloff, PhD (2021, Translational Biology, Medicine, and Health); now postdoctoral fellow at UC Davis)
- (8) Zhuoya Cui, PhD (2021, Translational Biology, Medicine, and Health); now industry analyst, Shanghai, China
- (9) Shengchuang Feng, PhD (2020, Psychology; Biological Psychology program); now postdoctoral research fellow at Nanyang Technological University, Singapore)
- (10) Katie McCurry, PhD (2020, Psychology; Clinical Science Program); now T32 postdoctoral fellow at University of Michigan)
- (11) John Wang, PhD (2020, Psychology; Biological Psychology program); now research faculty at Virginia Tech)
- (12) Vanessa Brown, PhD (2018, Psychology; Clinical Science Program); now tenure track assistant professor at University of Pittsburgh
- (13) Nina Lauharatanahirun, PhD (2017, Psychology; Biological Psychology program); now tenure track assistant professor at Penn State

### **Medical students, primary research mentor. Virginia Tech Carilion School of Medicine**

- (1) Mercedes Robinson, MD (2020; letter of distinction for research); now resident, UCSF Department of Neurology
- (2) Sohan Nagrani, MD (2015); now interventional pain physician

### **Membership on Masters'/Prelim/Doctoral Committees (not including primary mentees listed above)**

Baylor College of Medicine, Dept of Neuroscience (2008 - 2010): (1) Erika Perez; (2) Danny Jensen; (3) Joseph De Asis Cruz; (4) Alycia Yarnall; (5) Yong Cui. Virginia Tech (2011 - present), Dept of Psychology: (6) Merage Ghane; (7) Marika Coffman; (8) Andrew Valdespino; (9) Fang Wang; (10) Benjamin DeVore; (11) Michael Lewis; (12) Marlene Strege; (13) Corinne Carlton; (14) Ligia Antezana; (15) Hayoung Ko; (16) Katelyn Garcia; (17) Megan Fok; (18) Brianna George; Translational Biology, Medicine, & Health: (19) Holly Toole; (20) Masha Tsyglakova; (21) Amber Kelly; (21) Jeremy Myslowski; (22) Caiti-Erin Talty; Computer Science: (23) Tanmoy Sarkar Pias; (24) Rachel Jones (Wake Forest University).

### **Undergraduate and postbaccalaureate training**

**Virginia Tech** (2011 - present)

#### Post-baccalaureate research assistants

Abby Craig, 2023 - present; Olivia Murray, 2023 - present; (1) Clare Hogan, 2022 - present; (2) Carey Caldwell, 2022 - present; (3) Grace Collins, 2021 - present; (4) Isaac Levy, 2021 - present; (5) Alex Pettus, 2021 - 2023; (6) Rebecca Faubion-Trejo, 2020 - present; (7) Katherine Senn, 2020 - 2022; (8) Julia Julien, 2019-2021; supported by NIH Postbaccalaureate Research Education Award #GM066435 & NIH Research Supplement to Promote Diversity in Health Related Research to R01MH115221; (9) Whitney Allen, 2018 - 2020; (10) Douglas Chan, 2017 - 2019; (11) Brennan Delattre, 2016 - 2018; received Fulbright Scholarship (12) Chris Anzalone, 2016 - 2018; (13) Lauren Reckling, 2015 - 2016; (14) Rachel Wallace, 2014 - 2015; (15) Jennifer Nguyen, 2014; (16) Riley Palmer, 2014 - 2016; (17) Allison McKinnon, 2013 - 2016; (18) Andre Plate, 2012 - 2014; (19) Cari Rosoff, 2012 - 2015; (20) Kathleen McLachlan, 2011 - 2013; (21) Brittany Hamilton, 2011 - 2013; (22) Jennifer Lent, 2011 - 2012; (23) Katie McCurry, 2010 - 2012

#### Undergraduate research assistants

Ethan Nichols, 2023 - present; (1) Kelly Kadlec, 2015 - 2019; (2) Jennifer Nguyen, 2013; (3) Lydia Nguyen, 2013; (4) Kathleen McLachlan, 2011; (5) Winston Kennedy, 2011, McNair Scholars Program, US Dept of Education TRIO program; (6) Diandra Gordon, 2011, McNair Scholars Program, US Dept of Education TRIO program; (7) Phillip Kotlaba, 2011.

### **Baylor College of Medicine (2007 - 2010)**

#### Post-baccalaureate research assistants

(1) Katherine Gardner, 2010 - 2012; (2) Luz Martinez, 2010 - 2011, supported by NIH PREP (GM069234); (3) Cristina Tortarolo, Fall 2010; (4) Nina Lauharatanahirun, 2010 - 2011, supported by NIH Research Supplement to Promote Diversity in Health Related Research to R01MH091872; (5) Alex Acevedo-Rodriguez, 2009 - 2010, secondary mentor, (PREP); (6) Jessica Eiseman, 2009 - 2011; (7) James Sharp, 2009 - 2010; (8) April Sanders, 2008 - 2009; (9) Julie Brovko, 2007 - 2009; (10) LaRaun Lindsey, 2007 - 2013, supported by NIH Postbaccalaureate Research Education Program (PREP) GM069234;

#### Undergraduate research assistants

(11) Grace Chang, Summer 2010, Rice University; (12) Stephanie Regan, Summer 2010, Harvard University; (13) Spencer Boucher, Fall 2009 - 2011, Rice University; (14) Jamie Sammis, 2009 - 2010, Rice University; (15) Chanel Matney, Summer 2009, UT Dallas, Summer Medical and Research Training (SMART) Program; (16) Allen Liao, Summer 2009, Rice University; (17) Karen Marsden, Spring 2009 - present; (18) Noemie Levy, Spring 2009, Rice University; (19) Betsy Ohrn, Spring 2009, Rice University; (20) Andrew Thompson, 2008 - 2009, Rice University; (21) Christina Brovko, Summer 2008, UC Riverside; (22) Sam Soundar, 2008 - 2010, Rice University; (23) Magdalena Wistuba, 2007 - 2010, Rice University.

2000 - 2005            **Senior Common Room Member** (non-resident advisor), Cabot House, Harvard University.

2000 - 2005            **Academic Advisor**, Department of Psychology, Harvard University.

2000 - 2003            **Research Supervisor**, Department of Psychology, Harvard University. Supervised undergraduate research assistants and students conducting honors thesis research.

### **Courses**

2020                    **Block Director**, Brain and Cognitive Science; Translational Biology, Medicine, and Health Gateway Course (TBMH 5004), Virginia Tech. Mean teaching rating: 4.38/5

2018, 2020            **Course Director**, Fundamentals in Brain and Cognitive Science (TBMH 5074), Virginia Tech. Mean teaching rating: 5.6/6

2015, 2016, 2017      **Section Instructor**, Fundamentals of Neuroscience (TBMH 5014), Virginia Tech. Mean teaching rating: 4.6/5.0

2013                    **Course Director**, Advanced Topics in Decision Neuroscience (PSYC 6954), Virginia Tech. Overall rating: 5.2/6.0

2003 - 2004            **Co-Head Teaching Fellow**, Abnormal Psychology (Psy 18), Harvard University. Overall rating: 4.3/5.0

2001                    **Teaching Fellow**, Laboratory in Psychophysiology (Psy 1856r), Harvard University. Overall rating: 4.9/5.0

### **Guest Lectures**

- 2022 **Carilion Clinic Department of Psychiatry Journal Club.** “Peer information in risky decision-making”
- 2022 **Virginia Tech.** Topic: Circuits of Human Cognition: Social Behavior and Reward. (Course number TBMH 5014, “Fundamentals of Molecular Neuroscience”; Course Director Anthony LaMantia).
- 2020 **Virginia Tech Carilion School of Medicine.** Lecture “Introduction to Psychiatry” (Course: Block IV Medical Neuroscience; Director: Kristofer Rau).
- 2019 **Virginia Tech.** Guest Lecture “The social, emotional brain” (Course number HFNE 2774, “Meraki LLC”; Course Director Matt Hulver).
- 2018 **Virginia Tech.** “Computational psychiatry (parts 1 & 2).” (Course number TBMH 5074, “Fundamentals of Cognitive Brain Science”; Course Director Brooks King-Casas).
- 2017 **Virginia Tech.** Career discussion panelist (Course number PSYC 5374, “Health Psychology”; Course Director Richard Winett).
- 2017 **Virginia Tech.** “Computational approaches to psychiatric illness (parts 1 & 2).” (Course number TBMH 5014, “Fundamentals of Neuroscience”; Course Directors Michael Fox and Brooks King-Casas).
- 2016 **Virginia Tech.** “Cognitive neuroscience of healthy and debilitating emotion (parts 1 & 2).” (Course number TBMH 5014, “Fundamentals of Neuroscience”; Course Directors Michael Fox and Brooks King-Casas).
- 2015 **Virginia Tech.** Career discussion panelist (Course number PSYC 5374, “Health Psychology”; Course Director Richard Winett).
- 2015 **Virginia Tech.** “Neurobehavioral substrates of decision-making in depression.” (Course number TBMH 5014, “Fundamentals of Neuroscience”; Course Directors Michael Fox and Brooks King-Casas).
- 2014 **Virginia Tech.** “Depression: An introductory overview.” (Course number TBMH 5004, “Translational Biology, Medicine and Health: Gateway Course”; Course Director Michael Friedlander).
- 2014 **Virginia Tech.** “Neural substrates of reinforcement learning: Toward understanding & treating substance dependence.” (Course number NEUR 4984, “Neuroeconomics”; Course Director Sheryl Ball).
- 2013 **Virginia Tech.** “Translational neuroimaging: Perspectives from a clinical scientist.” (Course number PSYC 4364, “Introduction to Clinical Psychology”; Course Director Lee Cooper).
- 2010 **Baylor College of Medicine.** “Neuroimaging endophenotypes for major depressive disorder.” (Course number 350-422, “Neurobiology of Disease”; Course Coordinator Michael Friedlander).
- 2010 **Baylor College of Medicine.** “Neurobehavioral metrics for assessing individual differences and understanding the influence of others.” (Course number 350-434, “Higher Brain Function”; Course Coordinator Mariella De Biasi).
- 2009 **Baylor College of Medicine.** “Neuroimaging healthy and debilitating emotion.” (Course number 350-444, “Brain Imaging from Cell to System”; Course Coordinator Peter Saggau).
- 2009 **Baylor College of Medicine.** “Neuroimaging endophenotypes for major depressive disorder.” (Course number 350-422, “Neurobiology of Disease”; Course Coordinator Michael Friedlander).
- 2008 **University of Texas Graduate School of Biomedical Sciences.** “Neural signals of decision-making in economic games: Applications to autism and addiction.” (Course number GS02 0043, “Introduction to fMRI”; Course Coordinator Michael Beauchamp).

**INVITED TALKS**

- 2021 **Virginia Tech, Computational Tissue Engineering training group.** “Computational psychiatry: A possible way forward for depression.”
- 2020 **University of Hawaii at Hilo.** "Associability modulated loss learning in PTSD" (via Zoom due to COVID-19)
- 2018 **Computational Psychiatry 2018, Society for Neuroscience Pre-conference, San Diego CA.** “Computational psychiatry of depression and anxiety: a didactic introduction.”
- 2017 **Computational Psychiatry 2017.** “Computational Psychiatry of depression and PTSD.”
- 2016 **Women’s Health Virginia, Annual Conference on Women’s Health.** “Depression and its neuroscience.”
- 2016 **Society of Biological Psychiatry, Atlanta, GA.** “Reinforcement learning parameters of behavioral treatment response in depression.”
- 2015 **Society for Research in Psychopathology, New Orleans, LA.** “Understanding social functioning across psychopathologies through valuation and decision-making.”
- 2015 **Brain School, Brain Awareness Week, Virginia Tech Carilion Research Institute.** "Building blocks of the social brain"
- 2015 **National Advisory Mental Health Council, National Institute of Mental Health.** “Toward a computational psychiatry,” Invited panel member, Biobehavioral Research Awards for Innovative New Scientists (BRAINS) Awardee Panel.
- 2014 **St. Albans Psychiatric Conference, Roanoke VA.** "Translational neuroimaging in psychiatry: An overview and examples from depression."
- 2014 **Virginia Tech Presidential Installation** of Timothy Sands, 16th President of Virginia Tech. Panel discussion: Harnessing Brain Power.
- 2014 **International Conference on Neuroeconomics and Neuromanagement, Hangzhou, China.** Keynote address: “Neural substrates of decision-making and its change: Examples from psychiatric illness.”
- 2013 **Brain School, Brain Awareness Week, Virginia Tech Carilion Research Institute.** "When brains do (or feel!) things we'd rather they didn't"
- 2013 **Virginia Conversations, Virginia Public Radio (WVTF)**
- 2013 **Virginia Tech Carilion Research Institute European–U.S. Workshop on the Neuroscience of Cognition, Computation, and Decisions, Lugano, Switzerland.** "Neural markers of decision-making in psychiatric illness"
- 2013 **Computational Psychiatry 2013, Miami FL.** "Neurobehavioral metrics of decision-making under risk in health and substance dependence."
- 2012 **University of Pennsylvania, Center for Cognitive Science Colloquium.** “Decision neuroscience from scan to practice: preliminary data from substance dependence”
- 2012 **University of Hawaii at Hilo.** "Translational decision neuroscience from function to practice: A brief overview"
- 2012 **Virginia Tech Center for Autism Research Conference.** "Toward neurobehavioral metrics of social function: Examples from autism"
- 2012 **Virginia Tech, Dept of Psychology, Clinical Research Forum.** "Translational neuroimaging: preliminary data & perspectives"
- 2012 **Blue Ridge Association of Clinical Psychologists.** "Neurobehavioral metrics for the assessment & treatment of depression"
- 2011 **Virginia Tech Research Center-Arlington “Meet the Scientists”**
- 2011 **Salem VA Medical Center**
- 2011 **Nanyang Technological University, Culture Science Institute, Singapore**
- 2010 **University of Southern California, Psychology Colloquium.**

- 2010 **Annual meeting of the Association for Behavioral & Cognitive Therapies, Symposium, Neuroeconomics and Psychopathology: Implications for treatment.** “Measuring and modulating control signals in smokers”
- 2009 **Baylor College of Medicine, Imaging in Psychiatry, Residents’ Seminar Series.**
- 2009 **Rush and Helen Record Forum.** “Translational fMRI: Applications for depression and addiction”
- 2009 **31st Annual International IEEE Engineering in Medicine and Biology Society Conference.** “Toward functional neurobehavioral assessment of mood and anxiety”
- 2008 **Baylor College of Medicine, Imaging in Psychiatry, Residents’ Seminar Series.**
- 2008 **Rice University, Cognitive Research Seminar.**
- 2008 **US Department of Defense and Humana Military Healthcare Services.** Washington, DC.
- 2008 **US Department of Defense and TriCare South Sub-Regional Meeting.** Nashville, TN.
- 2007 **Baylor College of Medicine, Department of Neuroscience, invited colloquium.**

#### CLINICAL TRAINING

- 07/2005 - 07/2006  
Clinical Psychology Internship  
(APA Accredited) **Baylor College of Medicine, Menninger Department of Psychiatry, Human Neuroimaging Laboratory, Houston, TX. Adult Clinical Neuroscience Track.** Acquired training in fMRI study design, data analysis, and interpretation. Provided individual therapy and specialized cognitive, diagnostic, and personality assessment (including SCID-I; SCID-II; Diagnostic Interview for Personality Disorders-IV; Kauffman Brief Intelligence Test-II; battery of self-report cognitive, personality, symptom measures) to individuals participating in research or seeking treatment at the BCM Psychiatry Clinic and Student Counseling Center.  
Supervisors: Read Montague, PhD; Lois Friedman, PhD; Laura Lomax, PhD
- 09/2004 - 06/2005  
Practicum **Behavioral Health Partial Program, McLean Hospital, Belmont, MA.** Provided individual short-term therapy, group therapy, and specialized assessment to individuals with a range of severe psychiatric disorders transitioning from in-patient to out-patient facilities. Led and co-led a variety of treatment groups including: Self-Assessment, Medication Education, Depression & Anxiety Management, and Cognitive-Behavioral Therapy for Bipolar Disorder.  
Supervisors: Edmund Neuhaus, PhD; Mary Ellen Crowley, PhD; Nora Ilniczky, PhD
- 10/2003 - 08/2004  
Practicum **Obsessive Compulsive Disorder Institute, McLean Hospital, Belmont, MA.** Provided one-on-one exposure and response prevention coaching to individuals with treatment-resistant obsessive-compulsive disorder. Co-led Contract Setting treatment groups, Cognitive-Behavioral Therapy, Body Dysmorphic Disorder groups.  
Supervisor: Deborah Osgood-Hynes, PsyD
- 09/2003 - 02/2004  
Practicum **Psychological Assessment, Harvard University, Cambridge, MA.** Acquired skills in administering, interpreting, and report-writing of standardized tests in the areas of intellectual and personality assessment (e.g., Wechsler Adult Intelligence Scale, Wechsler Memory Scale, Minnesota Multiphasic Personality Inventory).  
Supervisor: Ellsworth Fersch, PhD
- 11/2001 - 05/2002  
Practicum **The Cambridge Hospital, Cambridge, MA.** Co-led out-patient anxiety reduction and psychopharmacology education groups. Participated in treatment formulation.  
Supervisors: Kate Dare-Winters, LicSW; Simon LeJeune, MD

09/2000 - 06/2005 **Diagnostic Assessment, Department of Psychology, Harvard University, Cambridge, MA.** 350+ hours conducting evidence-based assessment of individuals with and without psychopathology for eligibility for participation in research (e.g., Structured Clinical Interview for DSM-IV; Positive and Negative Syndrome Scale; McArthur Maudsley Delusion Assessment Scale; Calgary Depression Scale for Schizophrenia; battery of self-report measures). Supervisor: Patricia Deldin, PhD

**MEMBERSHIPS**

Association for Behavioral and Cognitive Therapies (2018 - present)  
Society for Research in Psychopathology (2017 - present; Chair, Membership Committee, 2017 - present)  
Society of Biological Psychiatry (2015 - present)  
Human Brain Mapping (2007 - present)  
Society for Neuroscience (2006 - present)  
Society for Neuroeconomics (2006 - 2009)  
Association for Psychological Science (2005 - present)  
Cognitive Neuroscience Society (2002 - present)  
Society for Psychophysiological Research (2001 - 2008)