

PEARL H. CHIU, PhD

2 Riverside Circle
Roanoke VA 24016
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EDUCATION AND EMPLOYMENT

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

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

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

2005 - 2006 **Baylor College of Medicine, Menninger Department of Psychiatry & Behavioral Sciences and Human Neuroimaging Laboratory, Houston, TX**
Intern Field: Clinical Psychology, Adult Neuroscience Track (APA Accredited Internship)

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

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

2007 - 12/2010 **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)**
Assistant Professor

01/2011 - 06/2016 **Virginia Tech Carilion Research Institute & School of Medicine, Roanoke VA; Virginia Tech Department of Psychology, Blacksburg VA**
Assistant Professor

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

07/2016 - present **Virginia Tech Department of Psychology, Blacksburg VA; Fralin Biomedical Research Institute at Virginia Tech Carilion and VTC School of Medicine, Roanoke VA**
Associate Professor

AWARDS AND HONORS

1998 **John Harvard Certificate of Merit.** University recognition of academic merit.

1998 **Certificate in Mind, Brain, Behavior.** University recognition of interdisciplinary research.

2000 - 2001 **Stimson Prize for Research,** Harvard University.

2001 **Bok Certificate of Distinction in Teaching,** Harvard University. 4.9/5.0 teaching rating.

2001 **Vincent Prize.** For Innovative Ideas for the Awareness & Treatment of Depression.

2001 - 2002 **Fellowship in Psychobiology.** Distinction for interdisciplinary research.

2003 - 2004 **Harvard University Graduate Society Dissertation Merit Fellowship.**

2004 **Student Poster Award,** Society for Psychophysiological Research.

2004 - 2005 **Dissertation Completion Merit Fellowship,** Harvard University.

2006 - 2007 **American Psychological Association Diversity in Neuroscience Postdoctoral Fellowship**

2010 **Biobehavioral Research Award for Innovative New Scientists (BRAINS),** National Institute of Mental Health.

2012 **Virginia Tech Scholar of the Week,** April 9.

2015 **National Public Radio, Source of the Week**

PEER-REVIEWED PAPERS

- 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.
- Deldin, P & Chiu, P (2005). Cognitive restructuring and EEG in major depression. *Biological Psychology*, 70, 141-151.
- Chiu, PH & Deldin, P (2007). Neural evidence for enhanced error detection in major depressive disorder. *American Journal of Psychiatry*, 164, 608-616.
- Commentary in: Oquendo, MA & Parsey, RV (2007). What have we learned about the neurobiology of major depression? *American Journal of Psychiatry*, 164, 540-542.
- 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.
- Commentary in: Frith, CD & Frith U (2008). The self and its reputation in autism. *Neuron*, 57, 331-332.
- 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.
- 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.
- Lindsey, L#, 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.
- Herman, S, Archambeau, OG#, Deliramich, AN#, Kim, BSK, Chiu, PH, Frueh, BC (2011). Depressive symptoms and mental health treatment in an ethnoracially diverse college student sample. *Journal of American College Health*, 59, 715-720.
- Tso, IF#, 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.
- D'Andrea, W#, Chiu, PH, Casas, BR, & Deldin, P (2012). Linguistic predictors of post-traumatic disorder symptoms following 11 September 2001. *Applied Cognitive Psychology*, 26, 316-323.
- King-Casas*, B & Chiu*, PH (2012). Understanding social function in psychiatric illness through multi-player economic games. *Biological Psychiatry*, 72, 119-125.
- 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.
- 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 - 1321.
- 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.
- Marsden, KE**#, 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.
- Chung, D#, Christopoulos, G**#, 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.
- Commentary in: Smith, DV & Delgado, MR (2015) Social nudges: utility conferred from others. *Nature Neuroscience*, 18, 791 - 792.

- 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, 58 - 63.
- 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.
- 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.
- Chung, D[#], Kadlec, K[#], Aimone, J, McCurry, K[#], King-Casas, B, Chiu, PH (2017). Valuation in major depression is intact and stable in a non-learning environment. *Scientific Reports*, 7, doi:10.1038/srep44374.
- 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.
- Brown, V[#], Zhu, L[#], Wang, J[#], Frueh, BC, King-Casas, B*, Chiu, PH* (2018). Associability-modulated loss learning is increased in posttraumatic stress disorder. *eLife*. eLife 2018;7:e30150 doi: 10.7554/eLife.30150. Commentary in: <https://doi.org/10.7554/eLife.30150.002>
- Wang, JM[#], Zhu, L[#], Brown, VM[#], 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. Commentary in: Stewart, JL (2019). A computational modeling approach supports negative reinforcement theories of addiction. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 4, 218-219.
- 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. 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.
- 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*.
- 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 (50) 31729-31737.
- 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*. Online ahead of print: doi:10.1001/jamapsychiatry.2021.1844
- * co-senior/corresponding author; # trainee co-author

CHAPTERS AND COMMENTARY

- 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.
- 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.
- Montague, PR & Chiu, PH (2007). For goodness' sake. [News and Views] *Nature Neuroscience*, 10, 137-138.
- 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.

Li, F^{#*}, Chiu, PH*, King-Casas, B* (in press). Trust vs Reciprocity: The role of outcome-based and belief-based motivations. In Krueger, F (Ed.), *The Neurobiology of Trust* (pp. TBD). Cambridge, UK: Cambridge University Press.

RESEARCH FUNDING

Current support

R01MH127773 NIH/NIMH	Chiu (PI) Evaluating neurocomputational loss and reward elements of the RDoC matrix Goal: Assess structural relationships, functional associations, and stability of loss and reward valuation using computational psychiatry methods.	07/2021 - 06/2026
R01MH106756 (NCE) NIH/NIMH	Chiu (PI) Neural substrates of reinforcement learning and its training in depression Goal: Use neurocomputational methods to study and improve learning in depression	02/2016 - 12/2021
R01DA051573 NIH/NIDA	Chiu, King-Casas (MPIs) Social influences on choices in adolescent substance use Goal: Examine effects of social peers on choices in adolescents	4/2021 - 03/2026
R25 NS105141 NIH/NINDS Role: Program Faculty	Fox (PI) Virginia Tech Carilion Research Institute Translational Neurobiology Summer Undergraduate Research Fellowship Goal: Provide research experiences to undergraduate and high school students in translational neurobiology research and expose students to independent research early in their careers.	01/2018 - 12/2022
R01MH115221 NIH/NIMH Role: Co-I	King-Casas (PI) Neurobehavioral mechanisms of social dysfunction in Borderline Personality Disorder Goal: Use computational models of social behavior and neuroimaging to evaluate interpersonal dysfunction in Borderline Personality Disorder	02/2018 - 12/2022
Merit D2354R VA/RR&D Role: Co-I	King-Casas (PI) Efficacy and neural mediators of response to TMT for PTSD Goal: Investigate neural mechanisms of treatment in PTSD using functional magnetic resonance imaging and probes of affective and social behavior	07/2018 - 06/2022
R25 GM066534 NIH/NIGMS Role: Program Faculty	Smith (PI) The Virginia Tech Postbaccalaureate Research and Education Program (PREP) The research and education program seeks to recruit and prepare postbaccalaureate scholars for admission into competitive and highly selective biomedical and behavioral sciences doctoral programs at research-intensive universities.	08/2003 - 06/2023
R25 GM072767 NIH/NIGMS Role: Program Faculty	Smith (PI) Virginia Tech Initiative for Maximizing Student Development (VT-IMSD) This training program seeks to develop and train underrepresented minorities in acquiring skills needed to succeed in Ph.D. programs and biomedical and behavioral research.	01/2007 - 04/2022

Past support available upon request.

SCIENTIFIC REVIEW AND SERVICE

Panel Service: **National:** National Institute of Mental Health Special Emphasis Review Panels ZMH1 ERB - (L04), March 2011; ZMH1 ERB - (S04), March 2012; ZMH1 ERB - (L04), March 2013; ZMH1 ERB-S (02), December 2013; ZMH1 ERB-D (01), September 2015; ZMH1 ERB-S (01), November 2015; ZMH1 ERB-M (05), June 2016; ZMH1 ERB-M (01) S, November

2016; ZMH1 ERB-L (02), February 2017; ZRG1 BDCN J 02, July 2017; ZRG1 BDCN-J 02 M, November 2017; ZMH1 ERB-M 04 S, November 2018; ZMH1 ERB-D (04), February 2019; ZMH1 ERB-S (04) S, March 2019 (Chair); ZMH1 ERB-Q (08), July 2020; ZMH1 ERB-Q (01), November 2020; ZMH1 ERB-S(07), June 2021. National Institute on Drug Abuse Special Emphasis Review Panel ZDA1 MXL-F(08), July 2013. Department of Veterans Affairs MHBB 1 - Mental Health and Behavioral Science B Merit Review Panel, January 2017. National Institute of General Medical Sciences COBRE I ZGM1 RCB-2 (C1), June 2021.

International: Reviewer, Swiss National Science Foundation (2014); Reviewer, Wellcome Trust, UK (2019); Reviewer, Netherlands Organisation for Health Research and Development (2020); Reviewer, Health Research Council of New Zealand (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.

Editorial: Editorial Board Member, Computational Psychiatry, MIT Press (2015 - 2020); Editorial Board Member, Scientific Reports (2018 - present); Review Editor in Computational Psychiatry, Frontiers in Psychiatry (2018 - present).

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

Virginia Tech: Virginia Tech Carilion Research Institute Distinguished Visiting Scholar Seminar Series Committee (2011, 2012, 2017, 2018); Cardio/Cerebrovascular Faculty Search Committee (2011); Computational Neuroscience Faculty Search Committee (2017 - present); Health Behaviors Faculty Search Committee (2017 - 2018). **Virginia Tech** Center for Autism Research Steering Committee Member (2012 - 2017); Adaptive Brain and Behavior Steering Committee (2016 - 2019); Search Committee, Director of Human Research Protection Program (2018); **College of Science**, Neuroscience Faculty Search Committee (2012 - 2013, 2015 - 2016); Scholarship Reviewer (2015); Promotion & Tenure Committee, elected member-at-large by the COS Faculty Association (2020 - present); COS Faculty Association, Psychology Representative (2021 - present). **Department of Psychology**, Scholarly Productivity Committee (2012 - 2018; 2020 - present); Diversity Committee (2016 - 2019); Developmental Science Faculty Search Committee (2017 - 2018); Personnel (Promotion & Tenure) Committee (2019 - 2020); Executive Committee (2021 - present); Clinical Science Faculty Search Committee (2021 - present). **Carilion Clinic: Carilion Clinic** Research Committee (2012 - 2013); Neurology Department Chair Search Committee (2017).

TEACHING AND ADVISING

Undergraduate and postbaccalaureate training

9/00 - 6/03

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

- 9/00 - 6/05 **Academic Advisor**, Department of Psychology, Harvard University.
- 9/00 - 6/05 **Senior Common Room Member** (non-resident advisor), Cabot House, Harvard University.
- 2007 - present
Research Mentor **Department of Neuroscience, Baylor College of Medicine.** *Undergraduate interns:* (1) Magdalena Wistuba, 2007 - 2010, Rice University; (2) Sam Soundar, 2008 - 2010, Rice University; (3) Christina Brovko, Summer 2008, UC Riverside; (4) Andrew Thompson, 2008 - 2009, Rice University; (5) Betsy Ohn, Spring 2009, Rice University; (6) Noemie Levy, Spring 2009, Rice University; (7) Karen Mardsen, Spring 2009 - present; (8) Allen Liao, Summer 2009, Rice University; (9) Chanel Matney, Summer 2009, UT Dallas, Summer Medical and Research Training (SMART) Program; (10) Jamie Sammis, 2009 - 2010, Rice University; (11) Spencer Boucher, Fall 2009 - 2011, Rice University; (12) Stephanie Regan, Summer 2010, Harvard University; (13) Grace Chang, Summer 2010, Rice University. *Post-baccalaureate research assistants:* (1) LaRaun Lindsey, 2007 - 2013 Postbaccalaureate Research Education Program (PREP); (2) Julie Brovko, 2007 - 2009; (3) April Sanders, 2008 - 2009; (4) James Sharp, 2009 - 2010; (5) Jessica Eiseman, 2009 - 2011; (6) Alex Acevedo-Rodriguez, 2009 - 2010, secondary mentor, (PREP); (7) Nina Lauharatanahirun, 2010 - 2011; (8) Cristina Tortarolo, Fall 2010; (9) Luz Martinez, 2010 - 2011 (PREP); (10) Katherine Gardner, 2010 - 2012.
- Virginia Tech Carilion Research Institute & School of Medicine and Virginia Tech Department of Psychology.** *Undergraduate interns:* (1) Phillip Kotlaba, Winter 2011, Virginia Tech; (2) Diandra Gordon, Summer 2011, McNair Scholars Program, US Dept of Education TRIO program; (3) Winston Kennedy, Summer 2011, McNair Scholars Program, US Dept of Education TRIO program; (4) Kathleen McLachlan, 2011, Virginia Tech; (5) Lydia Nguyen, Summer 2013 - present, Virginia Tech; (6) Jennifer Nguyen, 2013, Virginia Tech; (7) Kelly Kadlec, 2015 - present. *Post-baccalaureate research assistants:* (1) Katie McCurry, 2010 - 2012; (2) Jennifer Lent, 2011 - 2012; (3) Brittany Hamilton, 2011 - 2013; (4) Kathleen McLachlan, 2011 - 2013; (5) Cari Rosoff, 2012 - 2015; (6) Andre Plate, 2012 - 2014; (7) Allison McKinnon, 2013 - 2016 (8) Riley Palmer, 2014 - 2016; (9) Jennifer Nguyen, 2014, Virginia Tech; (10) Rachel Wallace, 2014 - 2015; (11) Lauren Reckling, 2015 - 2016; (12) Chris Anzalone, 2016 - 2018; (13) Brennan Delattre, 2016 - 2018; (14) Whitney Allen, 2018 - 2020; (15) Katherine Senn, 2020 - ; (16) Alex Pettus, 2021 - ; (17) Isaac Levy, 2021 - ; (18) Grace Collins, 2021 - .

Graduate student training

- 3/08 - present **Masters'/Prelim/Doctoral Committee**
Prelim/Doctoral Dissertation Committee, Baylor College of Medicine, Dept of Neuroscience: (1) Erika Perez, advisor Mariella De Biasi; (2) Danny Jenson, advisor John Dani; (3) Josepheen De Asis Cruz, advisor Read Montague, PhD received 2013; (4) Alycia Yarnall, advisor John Dani, Masters' received 2011; (5) Yong Cui, advisors John Dani and Tom Kosten, PhD received 2012. **Virginia Tech,** Dept of Psychology: (1) Vanessa Brown (Chair); (2) John Wang (Chair); (3) Nina Lauharatanahirun; (4) Merage Ghane; (5) Marika Coffman; (6) Katie McCurry (Chair); (7) Andrew Valdespino; (8) Fang Wang; (9) Benjamin DeVore; (10) Andrew Valdespino; (11) Marlene Strege. **Translational Biology, Medicine, & Health:** (1) Holly Toole; (2) Mark Orloff (Chair); (3) Zhuoya Cui (Co-Chair), (4) Natalie Melville. **Masters' Thesis Committee, Virginia Tech:** (1) Nina Lauharatanahirun; (2) John Wang (Chair); (3) Vanessa Brown (Chair); (4) Katie McCurry (Co-Chair); (5) Marika Coffman; (6) Shengchuang Feng (Co-Chair); (7) Michael Lewis; (8) Corinne Carlton.
- 9/11 - present **Doctoral student direct advisees, Virginia Tech**

John Wang (BA, University of Michigan; entered Biological Psychology Fall 2011; now research scientist at Virginia Tech)
Nina Lauharatanahirun (co-mentor; BA, Cal State Northridge; entered BP 2011; now assistant professor at Penn State)
Vanessa Brown (BA, St Olaf College; entered Clinical Psychology 2012; now assistant professor at University of Pittsburgh)
Katie McCurry (co-mentor; BA, Rice University; entered Clinical Psychology 2012)
Shengchuang Feng (co-mentor; entered BP 2014)
Zhuoya Cui (co-mentor; entered Translational Biology, Medicine, and Health, 2014)
Mark Orloff (BA, Virginia Tech; entered TBMH Fall 2015)
Natalie Melville (co-mentor; BS, Tulane University; entered TBMH 2019)
Gates Palissery (co-mentor; BS Carnegie Mellon University; entered TBMH 2020)
Vansh Bansal (co-mentor; BS William and Mary; entered Clinical Psychology 2020)
Shivani Goyal (co-mentor; BS Georgetown; entered Clinical Psychology 2021)
Kelsey Winkeler (co-mentor; BA The College of Wooster; entered Clinical Psychology 2021)

2/12 - present

Medical students, Virginia Tech Carilion School of Medicine

Primary mentor to: (1) Sohan Nagrani, 2011 - 2015 (BA, Virginia Tech); (2) Mercedes Robinson, 2015 - present (BA, Davidson College).
4th year research evaluator (Manek Aulakh, Sean Fletcher, James Joyner, Samuel Key)
2nd year research evaluator (Ehsan Dowlati, Steve Punzell, Alisha Tuteja, Omer Abdul Hamid, David Sabbagh, Varun Razdan, Shane Lince)

Postdoctoral trainees

11/08 - 04/11 Co-Mentor to George Christopoulos (PhD, 2008, Cambridge University); now Associate Professor at Nanyang Business School, Nanyang Technical University, Singapore.
09/09 - 09/2011 Dharol Tankersley (PhD, 2008, Duke University); now senior business analysis at Enerpact LLC.
09/10 - 2013 Secondary mentor to Jeff Engelmann (PhD, 2010, University of Minnesota) on R25CA057730 (PI, Shine Chang, MD Anderson); now instructor at University of Texas MD Anderson Cancer Center.
12/10 - 2013 Secondary mentor to Cameron Craddock (PhD, 2009, Georgia Institute of Technology) on NARSAD Young Investigator Award (PI Craddock; "Neuro-feedback for default mode network regulation in major depression"); now Director of Imaging, Child Mind Institute, New York and Research Scientist, Nathan Kline Insitute, New York.
10/11 - present Dongil Chung (PhD, 2011, Korea Advanced Institute for Science and Technology); currently Assistant Professor, Ulsan National Institute of Science and Technology, South Korea.
Lusha Zhu (PhD, 2011, University of Illinois at Urbana-Champaign); currently Assistant Professor of Psychology and McGovern Institute, Peking University, China.
Flora Li (PhD, 2019, Virginia Tech)

Courses

2/01 - 6/01 **Teaching Fellow**, Laboratory in Psychophysiology (Psy 1856r), Harvard University. Overall Teaching rating: 4.9/5.0
9/03 - 2/04 **Co-Head Teaching Fellow**, Abnormal Psychology (Psy 18), Harvard University. Overall Teaching rating: 4.3/5.0
08/13 - 12/13 **Course Director**, Advanced Topics in Decision Neuroscience (Psyc 6954), Virginia Tech. Overall Teaching rating: 5.2/6.0
08/16 - 01/19 **Lecturer**, Fundamentals of Neuroscience (TBMH 5014), Virginia Tech. Overall Teaching rating: 4.6/5.0
12/19 - 2020 **Course Director**, Fundamentals in Brain and Cognitive Science (TBMH 5074), Virginia Tech.

12/19 - 2020 **Block Director**, Brain and Cognitive Science; Translational Biology, Medicine, and Health Gateway Course (TBMH 5004), Virginia Tech.

Course Lectures

- 11/2008 **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).
- 4/2009 **Baylor College of Medicine.** “Neuroimaging healthy and debilitating emotion.” (Course number 350-444, “Brain Imaging from Cell to System”; Course Coordinator Peter Saggau).
- 5/2009 **Baylor College of Medicine.** “Neuroimaging endophenotypes for major depressive disorder.” (Course number 350-422, “Neurobiology of Disease”; Course Coordinator Michael Friedlander).
- 3/2010 **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).
- 5/2010 **Baylor College of Medicine.** “Neuroimaging endophenotypes for major depressive disorder.” (Course number 350-422, “Neurobiology of Disease”; Course Coordinator Michael Friedlander).
- 4/2013 **Virginia Tech.** “Translational neuroimaging: Perspectives from a clinical scientist.” (Course number PSYC 4364, “Introduction to Clinical Psychology”; Course Director Lee Cooper).
- 4/2014 **Virginia Tech.** “Neural substrates of reinforcement learning: Toward understanding & treating substance dependence.” (Course number NEUR 4984, “Neuroeconomics”; Course Director Sheryl Ball).
- 8/2014 **Virginia Tech.** “Depression: An introductory overview.” (Course number TBMH 5004, “Translational Biology, Medicine and Health: Gateway Course”; Course Director Michael Friedlander).
- 3/2015 **Virginia Tech.** “Neurobehavioral substrates of decision-making in depression.” (Course number TBMH 5014, “Fundamentals of Neuroscience”; Course Directors Michael Fox and Brooks King-Casas).
- 4/2015 **Virginia Tech.** Career discussion panelist (Course number PSYC 5374, “Health Psychology”; Course Director Richard Winett).
- 4/2016 **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).
- 2/2017 **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).
- 2/2017 **Virginia Tech.** Career discussion panelist (Course number PSYC 5374, “Health Psychology”; Course Director Richard Winett).
- 2/2018 **Virginia Tech.** “Computational psychiatry (parts 1 & 2).” (Course number TBMH 5074, “Fundamentals of Cognitive Brain Science”; Course Director Brooks King-Casas).
- 4/2019 **Virginia Tech.** Guest Lecture “The social, emotional brain” (Course number HFNE 2774, “Meraki LLC”; Course Director Matt Hulver).
- 5/2020 **Virginia Tech Carilion School of Medicine.** Lecture “Introduction to Psychiatry” (Course: Block IV Medical Neuroscience; Director: Kristofer Rau).

INVITED TALKS

- 2007 **Baylor College of Medicine, Department of Neuroscience**, invited colloquium.
- 2008, 2009 **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.** With Michael Friedlander and Read Montague. Washington, DC.
- 2008 **US Department of Defense and TriCare South Sub-Regional Meeting.** With Michael Friedlander. Nashville, TN.
- 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”
- 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”
- 2011 **Virginia Tech Research Center-Arlington “Meet the Scientists”**
- 2011 **Salem VA Medical Center**
- 2011 **Nanyang Technological University, Culture Science Institute, Singapore**
- 2/2012 **University of Pennsylvania, Center for Cognitive Science Colloquium.** “Decision neuroscience from scan to practice: preliminary data from substance dependence”
- 6/2012 **University of Hawaii at Hilo.** "Translational decision neuroscience from function to practice: A brief overview"
- 8/2012 **Virginia Tech Center for Autism Research Conference.** "Toward neurobehavioral metrics of social function: Examples from autism"
- 9/2012 **Virginia Tech, Dept of Psychology, Clinical Research Forum.** "Translational neuroimaging: preliminary data & perspectives"
- 10/2012 **Blue Ridge Association of Clinical Psychologists.** "Neurobehavioral metrics for the assessment & treatment of depression"
- 3/2013 **Brain School, Brain Awareness Week, Virginia Tech Carilion Research Institute.** "When brains do (or feel!) things we'd rather they didn't"
- 9/2013 **Virginia Conversations, Virginia Public Radio (WVTF)**
- 10/2013 **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"
- 10/2013 **Computational Psychiatry 2013, Miami FL.** "Neurobehavioral metrics of decision-making under risk in health and substance dependence."
- 01/2014 **St. Albans Psychiatric Conference, Roanoke VA.** "Translational neuroimaging in psychiatry: An overview and examples from depression."
- 10/2014 **Virginia Tech Presidential Installation** of Timothy Sands, 16th President of Virginia Tech. Panel discussion: Harnessing Brain Power.
- 11/2014 **International Conference on Neuroeconomics and Neuromanagement, Hangzhou, China.** Keynote address: “Neural substrates of decision-making and its change: Examples from psychiatric illness.”
- 3/2015 **Brain School, Brain Awareness Week, Virginia Tech Carilion Research Institute.** "Building blocks of the social brain"
- 5/2015 **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.
- 10/2015 **Society for Research in Psychopathology, New Orleans, LA.** “Understanding social functioning across psychopathologies through valuation and decision-making.”
- 5/2016 **Society of Biological Psychiatry, Atlanta, GA.** “Reinforcement learning parameters of behavioral treatment response in depression.”
- 6/2016 **Women’s Health Virginia, Annual Conference on Women’s Health.** “Depression and its neuroscience.”
- 11/2017 **Computational Psychiatry 2017.** “Computational Psychiatry of depression and PTSD.”

- 11/2018 **Computational Psychiatry 2018, Society for Neuroscience Pre-conference, San Diego CA.** "Computational psychiatry of depression and anxiety: a didactic introduction."
- 9/2020 **University of Hawaii at Hilo.** "Associability modulated loss learning in PTSD" (via Zoom due to COVID-19)
- 03/2021 **Virginia Tech, Computational Tissue Engineering training group.** "Computational psychiatry: A possible way forward for depression."

CLINICAL TRAINING

- 11/01 - 05/02
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
- 09/00 - 06/05
Research Assistant **Diagnostic Assessment, Harvard University, Cambridge, MA.** 350+ hours assessing controls and individuals with schizophrenia or major depression (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
- 09/03 - 02/04
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
- 10/03 - 08/04
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; observed Cognitive-Behavioral Therapy and Body Dysmorphic Disorder groups.
Supervisor: Deborah Osgood-Hynes, PsyD
- 09/04 - 06/05
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
- 07/05 - 07/06
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

MEMBERSHIPS

Society for Psychophysiological Research (2001 - 2008); Cognitive Neuroscience Society (2002 - present); American Psychological Society (2005 - present); Society for Neuroscience (2006 - present); Society for Neuroeconomics (2006 - 2009); Human Brain Mapping (2007 - present); Society of Biological Psychiatry (2017 - present); Society for Research in Psychopathology (2017 - present; Chair, Membership Committee, 2017 - present).