BRYAN S. GONZÁLEZ

Dartmouth College, Dept. of Psychological and Brain Sciences
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Education

Ph.D. student, **Dartmouth College** 2022(anticipated)
Degree: *Cognitive Neuroscience*
Advisor: Luke Chang, PhD

M.A., **New York University** 2017
Degree: *Psychology*
Thesis: *The Emergence of Human Fear: From Molecules to Mental States and Back*
Advisor: Zoran Josipovic, PhD & Catherine Hartley, PhD

B.A., **New York University**

Research Experience

NYU Langone Medical Center, *Dept. of Psychiatry* 2012 – 2016
Cohen Veterans Center for the Study of PTSD and TBI,
PI: Charles Marmar, MD
Senior Research Coordinator

Weill Cornell Medical College, *Dept. of Neurology* 2011
Center for Sleep Medicine,
PI: Arthur Speilman, MD
Laboratory Technician

Columbia University, *Dept. of Psychology* 2010
Social Relations Lab
PIs: Geraldine Downey, PhD & Tory Higgins, PhD
Research Assistant

Publications & Manuscripts

B. González, L.J. Chang, (In Press). Arbitrating Computational Models of Observational Learning. *Neuron*, 106(4), 558-560.

B. González, L.J. Chang, (forthcoming). Computational Models of Mentalizing. In *The Neural Basis of Mentalizing 1st edition*. M. Gilead, K. Ochsner (Eds). Springer Press.

R. Toll, W. Wu, S. Naparstek, Y. Zhang, M. Narayan, B. Patenaude, … **B. González**, … C.Marmar, A.Etkin,. (2020). An Electroencephalography Connectomic Profile of Post-Traumatic Stress Disorder. *The American Journal of Psychiatry, 177(3), 233-243*.

J. Heumer, B. Patenaude, P.Vertes, G.Fonzo, J.Richiardi, M.Goodkind, Y.Zaiko, K.Peng, A.Thompson, **B. González**, …, C. Marmar, E. Bullmore, R. O'Hara, A. Etkin. (under rev). Brain Network Architectural Mechanisms of Cognitive Dysfunction: From Neuroimaging to Genes and Treatment in Post-Traumatic Stress Disorder. *Nature Neuroscience*

A.Etkin, A. Maron-katz, W.Wu, G. Fonzo, J. Heumer, P. Vertes, B. Patenaude, J. Richiardi, M. Goodkind, C. Keller, J Ramous-Cejudo, Y. Zaiko, K. Peng, E. Shpigel, P. Longwell, R.Toll, A.Thompson, S, Zack, **B. González,** … C. Marmar, E. Bullmore, R. O'Hara. (2019). Using fMRI connectivity to define a treatment-resistant form of post-traumatic stress disorder. *Science Translational Medicine*.

In prep

B. González, J. vanBaar, LJ Chang; (In Prep). Inverse Reinforcement Learning as a computational framework for theory of mind.

B. González, LJ Chang; (In Prep). Neurocomputational substrates of mentalizing using psychological game theory: evidence from functional brain imaging.

U. Samadani, D. Ciddi, A. Chen, **B. González**, R. Toll, E. Lamm, M. Reyes, E. Nehrbass, R. Kolecki, R. Ritlop, N. Kapoor,M. Qian, R. Fergus, A. Etkin, C. Marmar, R. Theodore Smith. (In Prep). A Quantitated Comparison of Horizontal and Vertical Eye Movement Conjugacy Using Various Stimuli. *Brain Rsrch.*

Conference Presentations

B. González, J. van Baar, L.J. Chang, (2019). Inverse Reinforcement Learning of Utility from Social Decisions. Reinforcement Learning and Decision-Making. Montreal, Quebec, CA.

B. González, J. van Baar, L.J. Chang, (2019). Accurate Behavioral Predictions Using Inverse Reinforcement Learning as a Computational Framework for Theory-of-Mind. Social and Affective Neuroscience Society. Miami, FL.

Y. Zhang, R. Toll, W.Wu, P.Longwell, **B. González**, …C. Marmar, A. Etkin (2018). PTSD Subtype Identification Based on Resting-State EEG Functional Connectivity Biomarkers. Society for Biological Psychiatry. New York, NY.

W. Wu, C.Keller, **B. González**, … C. Marmar, A. Etkin. (2018). TMS-EEG Biomarkers for Combat-Related PTSD. Society for Biological Psychiatry. New York, NY.

C. Chick, C. Angeles, B. Patenaude, P. Longwell, E. Shpigel, **B. González**, …, A, Etkin. (2017). Failure to Downregulate Amygdala Activation during Regulation of Emotional Conflict in Post-Traumatic Stress Disorder: Results from a Large Veteran Sample. Society for Biological Psychiatry. San Diego, CA.

J. Chen, S. Baete, P. Yau, E,.Blessing, **B. González**, M. Qian, M. Li, F. Boada, C. Marmar. (2016). Structural Connectivity Analysis on Diffusion Spectrum Imaging Data Using Low Rank plus Sparse Decomposition for the Studies of Traumatic Brain Injury and Post-Traumatic Stress Disorder. International Society for Traumatic Stress Studies, Dallas, TX.

B. González, C. Marmar (2016). Does Time Heal All Wounds? Chronic PTSD and Brain Structures Linked to Memory. 20th Annual NYU MA Psychology Research Conference. New York, NY.

J. Chen, S. Baete, **B. González,** R. Otazo, M.Qian, M. Li, M. Perrin, C. Marmar, F. Boada. (2016). Connectivity Analysis on Diffusion Spectrum Imaging Using Low Rank plus Sparse Decomposition with Applications for the Study of Traumatic Brain Injury. Whistler Scientific Workshop on Brain Functional Organization, Connectivity, and Behavior. Whistler-Blackcomb, B.C.

S. Baete, J. Chen, **B. González**, M. Perrin, R. Otazo, C. Marmar, F. Boada. (2016). Improved Group Difference Detection in Higher Order Diffusion Acquisitions Using Low Rank Decomposition of ODF Distributions. Whistler Scientific Workshop on Brain Functional Organization, Connectivity, and Behavior. Whistler-Blackcomb, B.C.

J. Chen, S. Mueller, B. Ardekani, **B. González**, C. Marmar. (2015). Is There a Hippocampal Signal in Younger Veterans with Warzone PTSD? International Society for Traumatic Stress Studies, New Orleans, LA.

R. Toll, W. Wu, **B. González**, I. Akingbade, C. Marmar, A.Etkin. (2014). Toward Objective Biomarkers of Post-Traumatic Stress and Traumatic Brain Injury: Initial Findings of Peak Alpha Band Power Variance in Resting State Electroencephalography in Veterans of the Iraq and Afghanistan Wars. NSF Veteran Graduate Research Fellowship Conference, Washington DC.

Teaching

Dartmouth College

Perception, T.A.	2018
Systems Neuroscience, T.A., Lab Instructor, Guest Lecturer	2019
Systems Neuroscience, T.A., Lab Instructor, Guest Lecturer	2020
Principles of Human Brain Mapping with fMRI, T.A., Lab Instructor	2020

Honors

Kavli Summer Institute in Cognitive Neuroscience fellowship, UC Santa Barbara	2019
Summer School in Social Neuroscience & Neuroeconomics, Duke University	2019
Neurohackademy attendance fellowship, University of Washington, Seattle, WA	2019
E.E. Just Graduate Fellowship	2017
Hispanic Scholarship Fund Scholar	2016

Service

Inclusivity, Diversity, & Culture Committee at Dartmouth College *Member*	2018-2019
Building Inclusivity to Advance Science (BIAS) student organization at Dartmouth *Founder, Co-Chair*	2017-2019
Social Brain Sciences symposium series at Dartmouth College *Primary Organizer*	2017-2020

Technical Skills

Programming Languages
- Python, Javascript, Matlab

Web/Application Development
- HTML, CSS, Bootstrap
- Singularity, Docker
- Flask, Jinja2

Data Analysis
- R
- scikit-learn
- MySQL

Neuroimaging Analysis
- fMRI prep, FSL, SPM, Freesurfer
- DSI Studio
- ANT North Visor Neuronavigation
- BrainVision EEG recorder/analyzer
- Datalad, nipype, NItools

Data visualization
- Seaborn, matplotlib, ggplot
- D3.js

Other
- Git/github
- High performance computing