

# Gabrielle-Ann A. Torre, Ph.D.

Department of Speech, Language, & Hearing Sciences  
Kilachand Center for Integrated Life Sciences & Engineering  
610 Commonwealth Ave., Boston, MA 02215

E: [gat@bu.edu](mailto:gat@bu.edu)  
P: +1 (520) 393-9252  
W: [gabrielleanntorre.com](http://gabrielleanntorre.com)

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## ACADEMIC APPOINTMENTS

2019 - **Postdoctoral Fellow**  
Dept. of Speech, Language, and Hearing Sciences, Boston University  
Communication Neuroscience Research Laboratory  
Advisors: Drs. Tyler Perrachione and Helen-Tager Flusberg

## EDUCATION

2014 - 2019 **Ph. D. in Neuroscience**, Georgetown University  
Advisor: Dr. Guinevere Eden  
Thesis committee: Drs. Adam Green, Abigail Marsh, John Van Meter, Nadine Gaab  
Dissertation: *Studies of the Brain-Behavioral Relationships of Anatomy and Reading Ability*

2010 - 2014 **B. S. in Neuroscience & Cognitive Sciences**, *cum laude*, University of Arizona  
Advisor: Dr. Gene Alexander  
Thesis: *MRI Gray Matter Differences in Verbal vs. Perceptual IQ*

## RESEARCH INTERESTS

Reading, dyslexia, achievement gaps, cognitive development, socioeconomic status, neuroscience

## FELLOWSHIPS, HONORS, AND AWARDS

2019 T32 Postdoctoral Training Fellowship, NIDCD  
Karen Gale Exceptional PhD Student Award (nominated)  
Graduate Research Project Award, Georgetown University

2018 First Place Presentation in Neuroscience, Georgetown University Medical Center  
First Place Presentation in Pediatrics, Georgetown University Medical Center  
Travel Award, Georgetown University Medical Center  
Graduate Research Project Award, Georgetown University

2017 Travel Award, Georgetown University Medical Center

2016 First Place Presentation in Neuroimaging, Georgetown University Medical Center

2015 Kavli Summer Institute in Cognitive Neuroscience Fellowship  
NSF Graduate Research Fellowship (honorable mention)

2014 T32 Predoctoral Training Fellowship, NINDS  
Giue Scholarship, The Honors College, University of Arizona  
Da Vinci Award, The Honors College, University of Arizona  
Galileo Circle Fellowship, School of Mind, Brain, and Behavior, University of Arizona

- 2013 Travel Award, The Honors College, University of Arizona  
Galileo Circle Fellowship, School of Mind, Brain, and Behavior, University of Arizona
- 2010 Wildcat Excellence Scholarship, University of Arizona

### **Recognition for creative writing**

- 2014 Desmond Powell Award for Creative Writing, Dept. of English, University of Arizona  
AA Spain Award for Creative Writing, Dept. of English, University of Arizona
- 2013 Bill and Jane Spain Scholarship, Dept. of English, University of Arizona
- 2012 English Honors Program, Dept. of English, University of Arizona

### **PEER-REVIEWED PUBLICATIONS**

**Torre, G.A.**, & Eden, G.F. (2019). Relationships between gray matter volume and reading ability in typically developing children, adolescents, and young adults. *Developmental Cognitive Neuroscience*, 36(100636). doi: 10.1016/j.dcn.2019.100636

Raichlen, D.A., Bharadwaj, P.K., Fitzhugh, M.C., Haws, K.A., **Torre, G.A.**, Trouard, T.P., & Alexander, G.E. (2016) Differences in resting state functional connectivity between young adult endurance athletes and healthy controls. *Frontiers in Human Neuroscience*. doi: 10.3389/fnhum.2016.00610

Nguyen, L, Haws, K, Fitzhugh, M, **Torre, G.**, Hishaw, G, & Alexander, G. (2015) Interactive effects of subjective memory complaints and hypertension on cognitive performance in the elderly. *Aging, Neuropsychology, and Cognition*. 23(2): 154-70. doi: 10.1080/13825585.2015.1063580

### **MANUSCRIPTS IN PREP**

**Torre, G.A.\***, & McKay, C.C\*. Developmental Dyslexia: When the Brain Struggles to Read. \*co-first authors.

**Torre, G.A.**, Matejko, A.M., & Eden, G.F. The Relationship between Brain Structure and Proficiency in Reading and Mathematics in Children and Adults.

**Torre, G.A.**, Green, A.E., Compton, D.L., & Eden, G.F. Review: Scientific Support for the Dyslexic Advantage.

Matejko, A.A., McKay, C.C., Ashburn, S.A., **Torre, G.A.**, & Eden, G.F. Contributions of Developmental Cognitive Neuroscience to our Understanding of Developmental Dyslexia. In: Oxford University Press Handbook of Developmental Cognitive Neuroscience, Kathrin Cohen Kadosh (Ed.).

### **BOOK CHAPTERS, COMMENTARIES, ETC.**

**Torre, G.A.**, McKay, C.M., & Matejko, A.A. (2019) The early language environment and the neuroanatomical foundations for reading. *The Journal of Neuroscience*, 39(7): 1136-1138. doi: 10.1523/JNEUROSCI.2895-18.2018

### **TALKS**

**Torre, G.A.**, & Eden, G.F. (2019) Two Studies of Gray Matter Anatomy Relationships with Reading in Typical Readers: Implications for Dyslexia. *New England Research on Dyslexia Society*. Boston, MA.

**Torre, G.A., & Eden, G.F. (2018)** Relationships between Cortical Thickness and Reading. *Georgetown University Medical Center, Dept. of Pediatrics Grand Rounds*. Washington, D.C.

**Torre, G.A., & Eden, G.F. (2016)** The Relationships Between Gray Matter Volume and Reading, as well as IQ, and Socioeconomic Status. *Georgetown University Medical Center, Graduate Student Research Day*. Washington, D.C.

## **POSTERS**

**Torre, G.A., Matejko, A.A., & Eden, G.F. (2019)** Reading ability, but not math ability, is associated with cortical thickness in an age-dependent manner. *Flux Congress*. New York, NY.

**Torre, G.A., & Eden, G.F. (2018)** Cortical Volume and Thickness Do Not Relate to Reading Ability in Typical Children. *International Dyslexia Association*. Mashantucket, CT.

**Torre, G.A., & Eden, G.F. (2018)** Relationships between Cortical Thickness and Reading Ability. *Cognitive Neuroscience Society*. Boston, MA.

**Torre, G.A., & Eden, G.F. (2017)** Relationships Between Brain Structure and Reading, and IQ and SES in Typical and Dyslexic Children. *Human Brain Mapping Meeting*. Vancouver, BC.

**Torre, G.A., & Eden, G.F. (2016)** The Modulatory Roles of IQ and Socioeconomic Status (SES) on Gray Matter Volume. *Medical Center Graduate Student Organization Student Research Day*. Washington, D.C.

**Torre, G.A., Olulade, O., & Eden G.F. (2015)** The Relationship Between Brain Anatomy and IQ in Children. *Medical Center Graduate Student Organization Student Research Day*. Washington, D.C.

Raichlen, D, Bharadwa, P.K., Fitzhugh, M.C., Haws, K.A., **Torre, G.A.**, Trouard, T.P., & Alexander, G.A. (2015) Differences in resting state functional connectivity between aerobic athletes and sedentary young adults. *Society for Neuroscience Annual Meeting*. Chicago, IL.

Bloch J, Khatiwada M, Stevens B, **Torre G**, Darcey V, Rose E, VanMeter J, & Fishbein D. (2015) White Matter Tract Abnormalities in Alcohol-naïve Adolescents at High Risk for Alcohol Use Disorders. *Human Brain Mapping Meeting*. Honolulu, HI.

**Torre, G.A., & Alexander, G.E. (2014)** MRI Gray Matter Networks of Verbal and Perceptual Performances Differences in Healthy Aging. *University of Arizona Honors Thesis Forum*. Tucson, AZ.

Alexander, G.E., Fitzhugh, M.C., Raichlen, D.A., Haws, K.A., **Torre, G.A.**, Trouard, T.P., & Hishaw, G.A. (2014) Individual differences in aerobic fitness influence the regional pattern of brain volume in healthy aging. *Society for Neuroscience Annual Meeting*. Washington, D.C.

Haws, K.A., Hishaw, G.A., Totenhagen, J.W., **Torre, G.A.**, Gillespie, W.L., Reid, B.A., Nguyen, L.A., Fitzhugh, M.C., Lines, J.W., & Alexander, G.E. (2013) Relation of MRI white matter hyperintensity severity to nocturnal blood pressure variation and hypertension in healthy cognitive aging. *Society for Neuroscience Annual Meeting*. San Diego, CA.

Totenhagen, J.W., Bergfield, K.J., Lines, J.W., **Torre, G.A.**, Gillespie, W.L., Haws, K.A., Fitzhugh, M.C., Reid, B.A., Nguyen, L.A., Hishaw, G.A., Trouard, T.P., & Alexander G.E. (2013). Resting state MRI functional connectivity differences in healthy middle-aged to elderly adults. *Society for Neuroscience Annual Meeting*. San Diego, CA.

**Torre, G.A.** (2013) Enraptured: Cognitive Processes in the Literary Experience. *New Directions Conference*. Tucson, AZ.

## **TEACHING**

### *Georgetown University*

2016 - 2019      Drugs, the Brain, and Behavior: ICOS-325/PHAR-588  
Masters-level lectures on Neurodevelopment, Intellectual Disabilities, Synapse Formation, and Cognitive Aging (average student evaluation: 4.5/5)

2016 - 2017      Neuroimaging Summer Bootcamp  
Doctoral-level neuroimaging analysis lab intended to familiarize students to MRI methods

2015 & 2017      Recitation for Core Topics in Neuroscience: NSCI503  
Doctoral-level seminar for review of cellular, molecular, and cognitive neuroscience topics

### *University of Arizona*

2013 - 2014      Intriguing Topics in Neuroscience and Cognitive Neuroscience: NSCS495  
Undergraduate-level seminar on the science of creativity; advised by Dr. Charles Higgins

Cellular Neurophysiology: NROS307 and Molecular and Cellular Biology of Neurons: NROS380

Undergraduate-level lecture reviews and exam grading; advised by Dr. Alan Nighorn

Biostatistics: MAT263

Undergraduate-level lecture reviews and exam grading; advised by Dr. Kristen Beck

## **INVITED TALKS**

2019      Gabrieli Laboratory, MIT  
2018      Communication Neuroscience Laboratory, Boston University

## **SCIENCE OUTREACH AND PUBLIC ENGAGEMENT**

2019      **Podcast Interview** – BrainsOn!  
With a podcast geared towards sharing science with kids, I did an interview on how MRI works and how we use MRI tools to ask scientific questions.

2017 - present      **Co-Editor & Writer** – Knowing Neurons: [www.knowingneurons.com](http://www.knowingneurons.com)

Edit and write articles in collaboration with an international group of scientists; focus on neuroscience for general audiences; >1000 readers daily

- 2016 - 2019      **Outreach Coordinator & Teacher** – Siena School Project  
Led outreach efforts to teach the scientific method through four-day teaching events for high school students with language-based learning differences
- 2015 - 2019      **Teacher** – Brain Awareness Week, Washington, D.C.  
Taught brain anatomy lecture and lab to low-income students in the local community once a year for campus-wide outreach event
- 2015 - 2017      **Writer** – The Scientista Foundation, NY  
Wrote articles targeted at women’s issues in science through a non-profit organization dedicated to empowerment of pre-professional women pursuing STEM
- 2015 - 2016      **Teacher** – Science Night at Bancroft Elementary School, Washington, D.C.  
Taught hands-on physics workshops to complement 4<sup>th</sup> grade science curriculum
- 2013 - 2014      **Vice-President** – Neuroscience and Cognitive Science Ambassadors  
Co-founded an ambassador group to organize events held to promote awareness of neuroscience throughout the Tucson and University community

### **ACADEMIC SERVICE**

- 2015 - 2019      Student Liaison – Admissions Committee, Interdisciplinary Program in Neuroscience  
2017 - 2018      President – Student Government, Interdisciplinary Program in Neuroscience  
2015 - 2017      Secretary – Student Government, Interdisciplinary Program in Neuroscience  
2013 - 2014      Teacher – Literacy Volunteers of Tucson

### **STUDENT MENTORING**

- 2019              Jamie Chin – Boston University, Masters thesis student  
2018              Margaret McDermott – Georgetown University undergraduate, research assistant  
                     Lailah Fritz – Holton-Arms School, summer research internship  
                     Kelly Mandella – Georgetown University undergraduate, research assistant  
2017              Lucy Core – H-B Woodlawn High School, summer research internship  
                     Lu Collina – Siena High School Student, month-long research internship  
                     Natalie Smith – Georgetown University undergraduate, research assistant

### **PROFESSIONAL MEMBERSHIPS**

Flux Society for Developmental Cognitive Neuroscience  
Cognitive Neuroscience Society  
International Dyslexia Association  
Organization for Human Brain Mapping  
Association for Women in Science  
American Academy for the Advancement of Science

Society for Neuroscience  
Evelyn F. McKnight Brain Research Institute