

Dale Zhou

Curriculum Vitae

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Education

- 2017– **PhD Student in Neuroscience**,
Advisors: Danielle Bassett and Theodore Satterthwaite,
University of Pennsylvania.
- 2015 **Honors B.Sc. in Psychology**, Minor in **Neuroscience**.
Honors B.A. in Philosophy,
University of Maryland, College Park.

Awards and Achievements

- 2018 Language and Communication Sciences Research Fund Stipend
- 2015 NIH Intramural Research Training Award
- 2015 Departmental Honors in Psychology
- 2015 Departmental Honors in Philosophy
- 2013 College Park Scholars Co-Curricular Scholarship Award
- 2012 College Park Scholar in Global Public Health
- 2011 Ling Ho Anita K'ung Tong Scholarship
- 2010 University of Maryland President's Scholarship

Publications

Accepted/Published

Journal articles

- Zhou, D.**, Liu, S., Zhou, X., Berman, R.A., Broadnax, D.D., Rapoport, J.L., and Thomas, A.G. (2018) *7 Tesla MRI reveals hippocampal structural abnormalities associated with memory intrusions in childhood-onset schizophrenia*. *Schizophrenia Research*. DOI: 10.1016/j.schres.2018.07.023
- Zhou, D.**, Gochman, P., Broadnax, D.D., Rapoport, J.L., and Ahn, K. (2016). *15q13.3 duplication in two patients with childhood-onset schizophrenia*. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*. DOI: 10.1002/ajmg.b.32439

Book chapters

- Zhou, D.**, Sequeira, S., Driver, D., Thomas, S. (2018). *Disruptive Mood Dysregulation Disorder*. In S. Thomas and D. Driver (Eds.), *Complex Disorders in Pediatric Psychiatry: A Clinician's Guide*. Clinics Review Articles, Elsevier Inc. ISBN: 9780323511476
- Rapoport, J.L., **Zhou, D.**, and Ahn, K. (Accepted). *Aetiology of intellectual disability: general issues and prevention*. In N. Andreasen, J. Geddes, and G. Goodwin (Eds.),

New Oxford Textbook of Psychiatry, Third Edition. Oxford University Press.

Open-source software

Gorgolewski, K.J., Esteban, O., [110 others, including **Zhou, D.**], and Ghosh, S. (2016). *Nipype: a flexible, lightweight and extensible neuroimaging data processing framework in Python. 0.13.0*. DOI: 10.5281/zenodo.581704

In Preparation

Journal articles

Metabolic running costs of brain network communication in developing youth
Exploring curiously: A generative model of naturalistic information-seeking
7 Tesla MRI study of ketamine's effect on hippocampal subfield structure in treatment resistant depression patients

Conference Presentations

Julius Axelrod Symposium (2017). *Ultra-high field 7-Tesla MRI reveals hippocampal subfield volume and shape abnormalities in childhood-onset schizophrenia patients compared to healthy siblings and controls*. Affiliated with Society for Neuroscience. NIMH, Intramural Research Program, Bethesda, Maryland.

Conference Abstracts

- Zhou, D.**, Liu, S., Zhou, X., Berman, R.A., Broadnax, D.D., Rapoport, J.L., and Thomas, A.G. (2017). *Ultra-high field 7-Tesla MRI reveals hippocampal subfield volume and shape abnormalities in childhood-onset schizophrenia patients compared to healthy siblings and controls*. Julius Axelrod Symposium, Bethesda, Maryland.
- Zhou, D.**, Liu, S., Zhou, X., Berman, R.A., Broadnax, D.D., Rapoport, J.L., and Thomas, A.G. (2017). *Ultra-High Field 7-Tesla MRI Shape Analysis of Hippocampal Subfields in Childhood-Onset Schizophrenia and Healthy Siblings*. Society for Biological Psychiatry, San Diego, California.
- Zhou, D.**, Liu, S., Berman, R.A., Broadnax, D.D., Rapoport, J.L., and Thomas, A.G. (2016). *7-Tesla MRI Reveals Regional Hippocampal Deficits in Childhood-Onset Schizophrenia*. American College of Neuropsychopharmacology, Hollywood, Florida. In *Neuropsychopharmacology*, Vol. 41, pp. S591-S591.
- Zhou, D.**, Liu, S., Berman, R.A., Broadnax, D.D., Rapoport, J.L., and Thomas, A.G. (2016). *7-Tesla MRI reveals regional hippocampal volume deficits of dentate gyrus in childhood-onset schizophrenia*. Society for Neuroscience, San Diego, California.
- Zhou, D.**, Gochman, P., Broadnax, D.D., Rapoport, J.L., and Ahn, K. (2016). *15q13.3 duplication in two patients with childhood-onset schizophrenia*. Society of Biological Psychiatry, Atlanta, Georgia.
- Zhou, D.** (2012). *The psychology of social movements in the U.S.* 16th Annual College Park Scholars Academic Showcase, College Park, MD.
- Zhou, D.** (2009). *BIRC5 survivin protein cloning vector shows promise for anti-cancer drug discovery*. Roswell Park Cancer Institute Research Symposium, Buffalo, NY.

Research Experience

- 2018– **Graduate Student**, *Language and Communication Sciences Certificate Program*, University of Pennsylvania, Philadelphia, PA.
- Research, seminars, and classes in psycholinguistics spanning the departments of Computer and Information Sciences, Linguistics, Neuroscience, and Psychology.
- 2017– **Special Volunteer**, *Experimental Therapeutics and Pathophysiology Branch*, NIMH, Bethesda, MD.
- Using 7-Tesla structural MRI to study how ketamine treatment affects longitudinal hippocampus morphometry in treatment-resistant depression patients.
- 2017–2018 **Rotating Student**, *University of Pennsylvania*, Philadelphia, PA.
- Kable Lab (Joseph Kable, PI), Psychiatric and Developmental Imaging Lab (Theodore Satterthwaite, PI), Complex Systems Group (Danielle Bassett, PI)
- 2015–2017 **NIH Intramural Research Trainee**, *Child Psychiatry Branch*, NIMH.
- Investigated genetic and neural bases of childhood-onset schizophrenia.
- 2014–2015 **Psychology Honors Candidate**, *Decision, Attention, and Memory Lab*, University of Maryland, College Park.
- Committee: Drs. Michael Dougherty (Chair), Donald Bolger and Robert Slevc
- Thesis used structural equation modeling, factor analysis, and Bayesian regression to investigate behavioral and neural correlates of working memory.
- 2014–2015 **Philosophy Honors Candidate**, University of Maryland, College Park.
- Committee: Drs. Peter Carruthers (Chair), Dan Moller and Erin Eakers
- Thesis investigated conceptual commitments of beliefs as rational and truth-tracking. Compared theories defining belief, their limitations, and implications for psychiatric understanding of delusional belief and psychosis.
- 2013–2014 **Special Volunteer**, *NIH*, Laboratory/Branch of Genitourinary Cancer Pathogenesis, Bethesda, MD.
- Investigated efficacy of immunotoxins targeting the Fn-14 receptor for abating metastatic prostate cancer growth in vitro
- 2014 **Research Assistant**, *Maryland Psychotherapy Clinic and Research Lab*, University of Maryland, College Park.
- Implemented qualitative model of grief based on attachment theory
- 2012–2013 **College Park Scholars Capstone**, *U.S. Library of Congress*, Washington, D.C.
- Researched social movements in the U.S., marking completion of a selective 2-year interdisciplinary Living-Learning program in Global Public Health
- 2011–2013 **Research Assistant**, *Decision, Attention, and Memory Lab*, University of Maryland, College Park.
- Studied the limits of improving working memory capacity and fluid intelligence
- 2009–2010 **Summer Student**, *Roswell Park Cancer Institute*, Buffalo, NY, Department of Pharmacology and Therapeutics.
- Engineered novel nucleic acid cloning vector for tumor suppressor BIRC5 protein associated with tumorigenesis and successfully transfected the protein into human lung cancer cells

--- Outreach and Service

Teaching

Tutorial: How to construct semantic networks, (2018) *EAS244/CLST344/INTG344 Curiosity: Ancient and Modern Thinking About Thinking*.

github.com/dalejn/semanticNetworks

Ad hoc reviewer

Biological Psychiatry, Cerebral Cortex, IEEE: Transactions on Network Science and Engineering

Invited Talks

Panelist, *Post-Baccalaureate Research Experiences in Behavioral Sciences* (2017).
University of Maryland, College Park.

Organizations

2017– **Section Chief**, *Brains in Brief*, Section on Computational and Sensory Neuroscience,
Graduate-Led Initiatives and Activities (GLIA), University of Pennsylvania.
<https://www.upennlia.com/brainsinbriefs/>

2017– **Founder**, *Psychology Honors Alumni Mentors*, University of Maryland, College Park.

2014–2015 **Vice President**, *Philosophy Club*, University of Maryland, College Park.