

## Dale Zhou

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### CONTACT INFORMATION

Complex Systems Lab  
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### EDUCATION

#### University of Pennsylvania

Ph.D. candidate in Neuroscience

Advisors: Danielle Bassett, Theodore Satterthwaite

#### University of Maryland, College Park

B.A. in Philosophy

B.S. in Psychology

Minor in Neuroscience

Advisors: Peter Carruthers, Michael Dougherty, D.J. Bolger

### Publications

#### SUBMITTED/ UNDER REVISION

- [17] Zurn, P., **Zhou, D.**, Lydon-Staley, D.M., & Bassett, D.S. *Edgework: Viewing curiosity as fundamentally relational*. In Dezza, I.C., Schulz, E., Wu, C. (Eds.), Information Seeking. Cambridge University Press. [PsyArXiv: 10.31234/osf.io/crzae](#)
- [16] Ju, H., **Zhou, D.**, Blevins, A.S., Lydon-Staley, D.M., Kaplan, J., Tuma, J.R., Bassett, D.S. (2020). *The network structure of scientific revolutions*. [SocArXiv: https://osf.io/preprints/socarxiv/tga9c/](#)
- [15] Bertolero, M.A., Dworkin, J.D., David, S.U., López Lloreda, C., Srivastava, P., Stiso, J., **Zhou, D.**, Dzirasa, K., Fair, D.A., Kaczkurkin, A.N., Marlin, B.J., Shohamy, D., Uddin, L.Q., Zurn, P., & Bassett, D.S. (2020). *Racial imbalance in neuroscience reference lists and intersections with gender*. [bioRxiv: 2020.10.12.336230](#)
- [14] Wang, X., Dworkin, J.D., **Zhou, D.**, Stiso, J., Falk, E., Bassett, D.S., Zurn, P., Lydon-Staley, D.M. (2021). *Gendered citation practices in the field of communication*. [PsyArXiv: 10.31234/osf.io/ywrcq](#)
- [13] **Zhou, D.**, Lynn, C.W., Cui, Z., Ciric, R., Baum, G.L., Moore, T.M., Roalf, D.R., Detre, J.A., Gur, R.C., Gur, R.E., Satterthwaite, T.D., & Bassett, D.S. (2020, under revision at Nature Neuroscience). *Efficient Coding in the Economics of Human Brain Connectomics*. [bioRxiv: 10.1101/2020.01.14.906842](#)

#### JOURNAL ARTICLES

- [12] Lydon-Staley, D.M., **Zhou, D.**, Blevins, A.S., Zurn, P., & Bassett, D.S. (2020). *Hunters, busybodies, and the knowledge network building associated with deprivation curiosity*. [Nature Human Behavior](#). DOI: 10.1038/s41562-020-00985-7
- [11] Chai, L.R., **Zhou, D.**, & Bassett, D.S. (2019). *Evolution of semantic networks in biomedical texts*. [Journal of Complex Networks](#). DOI: 10.1093/com-net/cnz023
- [10] **Zhou, D.**, Liu, S., Zhou, X., Berman, R.A., Broadnax, D.D., Rapoport, J.L., & 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
- [9] **Zhou, D.**, Gochman, P., Broadnax, D.D., Rapoport, J.L., & 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

## REVIEWS & BOOK CHAPTERS

- [8] **Zhou, D.**, Lydon-Staley, D.M., Zurn, P., & Bassett, D.S. (2020). *The growth and form of knowledge networks by kinesthetic curiosity*. [Current Opinion in Behavioral Sciences](#). DOI:10.1016/j.cobeha.2020.09.007
- [7] Srivastava, P., Nozari, E., Kim, J.Z., Ju, H., **Zhou, D.**, Becker, C., Pasqualetti, F., & Bassett, D.S. (2020). *Models of communication and control for brain networks: distinctions, convergence, and future outlook*. [Network Neuroscience](#). DOI: 10.1162/netn.a.00158
- [6] Rapoport, J. L., **Zhou, D.**, & Ahn, K. (2020). *Intellectual disabilities*. New Oxford Textbook of Psychiatry, 3rd edition. Oxford University Press, USA. ISBN: 9780198713005
- [5] **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

## IN PREP

- [4] **Zhou, D.**, Kim, J.Z., Moore, T.M., Roalf, D.R., Detre, J.A., Gur, R.C., Gur, R.E., Satterthwaite, T.D., & Bassett, D.S. *Predictive Coding in the Economics of Human Brain Connectomics*.
- [3] Weninger, L., Kim, J.Z., **Zhou, D.**, Bertolero, M.A., Cornblath, E., Dorit Merhof, and Bassett, D.S. *Information in Human Brain States*
- [2] **Zhou, D.**, Kang, Y., Cosme, D. Mahadevan, A., He, X., Cooper, N., Caciagli, L., Parkes, L., Mucha, P., Ochsner, K., Lydon-Staley, D., Falk, E., and Bassett, D.S. *Mindfulness supports control and dynamic reconfiguration of functional brain networks for self-regulating health behavior*
- [1] Mahadevan, A., Cornblath, E., Lydon-Staley, D.M., **Zhou, D.**, Parkes, L., Larsen, B., Adebimpe, A., Kahn, A.E., Gur, R.C., Gur, R.E., Satterthwaite, T.D., Wolf, D.H., & Bassett, D.S. *Alprazolam modulates persistence energy during emotion processing in first-degree relatives of individuals with schizophrenia: a network control study*.

## Fellowships, Awards, & Honors

2021-23	NIH F31 National Research Service Award F31MH126569
2019	National Academy of Sciences Travel Award
2018-20	Language and Communication Sciences Research Fund Stipend
2018-	Language and Communication Sciences Program
2015-17	NIH Intramural Research Training Award
2015	Departmental Honors in Psychology
2015	Departmental Honors in Philosophy
2013	College Park Scholars Co-Curricular Scholarship Award
2011	Ling Ho Anita K'ung Tong Scholarship
2010-12	College Park Scholar in Global Public Health
2010-14	University of Maryland President's Scholarship

## Conference Presentations

### TALKS

- [2] *Network Mechanisms of Curiosity and Information Seeking During Wikipedia Exploration* (2019). [National Academy of Sciences Colloquium: The Brain Produces the Mind By Modeling](#). Irvine, California.

REFEREED  
CONFERENCE  
PROCEEDINGS

- [1] *Ultra-high field 7-Tesla MRI reveals hippocampal subfield volume and shape abnormalities in childhood-onset schizophrenia patients compared to healthy siblings and controls* (2017). [9<sup>th</sup> Annual Julius Axelrod Symposium](#). NIMH, Intramural Research Program. Bethesda, Maryland.

- [9] Wang, X., Lydon-Staley, D., Stiso, J., **Zhou, D.**, Falk, E., Bassett, D., Zurn, P. (2021). *Gendered citation practices in the field of communication*. [71st Annual International Communication Association Conference](#).

Communication & Science Biology Top Paper Award

POSTERS

- [8] Ju, H., **Zhou, D.**, Blevins, A.S., Lydon-Staley, D.M., Kaplan, J., Tuma, J.R., Bassett, D.S. (2021). *The network structure of scientific revolutions*. [American Physical Society March Meeting](#) (virtual due to COVID-19).
- [7] **Zhou, D.**, Lynn, C.W., Cui, Z., Ciric, R., Baum, G.L., Moore, T.M., Roalf, D.R., Detre, J.A., Gur, R.C., Gur, R.E., Satterthwaite, T.D., & Bassett, D.S. (2020). *Efficient Coding in the Economics of Human Brain Connectomics*. [Organization for Human Brain Mapping](#). Montreal, CA (virtual due to COVID-19).
- [6] **Zhou, D.**, Lydon-Staley, D., Zurn, P., Bassett, & D.S. (2019). *Network Mechanisms of Curiosity and Information Seeking During Wikipedia Exploration*. [National Academy of Sciences Colloquium: The Brain Produces the Mind By Modeling](#), Beckman Center of the National Academy of Sciences & Engineering, Irvine, California.
- [5] **Zhou, D.**, Liu, S., Zhou, X., Berman, R.A., Broadnax, D.D., Rapoport, J.L., & 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*. [9<sup>th</sup> Annual Julius Axelrod Symposium](#), Bethesda, Maryland.
- [4] **Zhou, D.**, Liu, S., Zhou, X., Berman, R.A., Broadnax, D.D., Rapoport, J.L., & Thomas, A.G. (2017). *Ultra-High Field 7-Tesla MRI Shape Analysis of Hippocampal Subfields in Childhood-Onset Schizophrenia and Healthy Siblings*. [Society of Biological Psychiatry](#), San Diego, California.
- [3] **Zhou, D.**, Liu, S., Berman, R.A., Broadnax, D.D., Rapoport, J.L., & 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.
- [2] **Zhou, D.**, Liu, S., Berman, R.A., Broadnax, D.D., Rapoport, J.L., & 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.
- [1] **Zhou, D.**, Gochman, P., Broadnax, D.D., Rapoport, J.L., & Ahn, K. (2016). *15q13.3 duplication in two patients with childhood-onset schizophrenia*. [Society of Biological Psychiatry](#), Atlanta, Georgia.

Open-source  
Code

- [3] **Zhou, D.**, Cornblath, E.J., Stiso, J., Teich, E.G., Dworkin, J.D., Blevins, A.S., & Bassett, D.S. (2020). *Gender Diversity Statement and Code Notebook v1.0 (Version v1.0)*. Zenodo. DOI: [10.5281/zenodo.3672110](#)
- [2] **Zhou, D.** (2018). *Building word2vec and Co-Occurrence Networks*, [link](#)

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

## Teaching

- 2020 Teaching Assistant, Curiosity: Ancient and Modern Thinking About Thinking  
(with Danielle Bassett)
- 2019-20 Guest Lecturer, Network Neuroscience  
(with Danielle Bassett)
- 2019 Teaching Assistant, Computational Neuroscience Lab  
(with Nicole Rust)

## STUDENTS ADVISED

- [2] Samantha Simon (University of Pennsylvania, Physics 2023)  
Diversity in science; network science; semantic networks
- (a) University Scholars Program
- [1] Mark Choi (University of Pennsylvania, Computer Science 2021)  
Network structure in mathematics
- (a) Top Poster Presentation for Rachleff Scholars Program at Penn Engineering Summer REU Symposium

## Professional Service

- 2020– Organizing Committee, Innovators in Cognitive Neuroscience Symposia, [\[link\]](#)
- 2020– Web Developer, Black in STEM in Academia, [\[link\]](#)
- 2019– Organizer, Web Developer, Penn Network Visualization program, [\[link\]](#)
- 2019– Apprentice Chief, Upward Bound: Research Fridays, [\[link\]](#)
- 2019–20 Committee, APICAL Service Award
- 2017–20 Section Chief, Brains in Brief science communication, [\[link\]](#)
- 2017–18 Founder, Psychology Honors Alumni (University of Maryland)
- 2014–15 Vice President, Philosophy Club (University of Maryland)

## MENTORSHIP

- 2020– MindCORE Step-Ahead Mentorship Program, [\[link\]](#)
- 2019– Upward Bound: Research Fridays, [\[link\]](#)

## REVIEWER

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

## HACKATHONS

Stiso, J.\* & **Zhou, D.\*** (2020). *Tools for Combating Citation Bias*. Organization for Human Brain Mapping Hackathon, Montreal, Canada. [\[link\]](#)

## INVITED TALKS

Panelist, Post-Baccalaureate Research Experiences (2017), University of Maryland

## Technical Skills & Training

### PROGRAMMING

R, Python, MATLAB

### IMAGE PROCESSING

Nipype, Freesurfer, ANTs, FSL, AFNI

## WORKSHOPS

Summer Workshop in Cognitive Electrophysiology (2020), Philadelphia, PA.  
Organization for Human Brain Mapping Hackathon (2020), Montreal, Canada.  
Computational Psychiatry Summer Course (2019), New York, New York.