

EDUCATION	<b>University of Pennsylvania</b> Ph.D in Neuroscience Advisors: Dani Bassett, Theodore Satterthwaite	2023
	<b>University of Maryland, College Park</b> B.A. (honors) in Philosophy B.S. (honors) in Psychology Minor in Neuroscience	2015
INTERESTS	Cognitive neuroscience, computational psychiatry, network science, information theory, reinforcement learning, computational social science, diversity in science	
POSITIONS	Hewitt Postdoctoral Research Fellow & Cunningham Scholar <b>University of California, Irvine</b> Department of Neurobiology and Behavior Department of Cognitive Sciences Advisors: Michael Yassa, Aaron Bornstein	2023–Present
	Postbaccalaureate Researcher <b>National Institute of Mental Health</b> Child Psychiatry Branch Advisor: Judith Rapoport	2017

PUBLICATIONS

	<b>Google Scholar:</b> citations = 1028   h-index = 13   i10-index = 15
SUBMITTED/ UNDER REVISION	* = mentee

JOURNAL  
ARTICLES

[1] Adams, J.N., Kark, S.M., Chappel-Farley, M.G., Escalante, Y., **Zhou, D.**, Stith, L.A., Rapp, P.E., Yassa, M.A., & the Alzheimer’s Disease Neuroimaging Initiative (2024). Pathological brain state dynamics in Alzheimer’s disease. ***bioRxiv***: [10.1101/2023.08.30.555617v1](#)

[16] **Zhou, D.**, Patankar, S.P., Lydon-Staley, D.M., Zurn, P., Gerlach, M., & Bassett, D.S. (2024). Architectural styles of curiosity in global Wikipedia mobile app readership. ***Science Advances***. DOI: 10.1126/sciadv.adn3268  
↳ Featured in ***Nature*** | ***Science (podcast)***

[15] Parkes, L., Kim, J.Z., Stiso, J., Brynildsen, J.K., Cieslak, M., Covitz, S., Gur, R.E., Gur, R.C., Pasqualetti, F. Shinohara, R.T., Stiso, J., **Zhou, D.**, Satterthwaite, T.D., & Bassett, D.S. (2023). Using network control theory to study the dynamics of the structural connectome. ***Nature Protocols***. DOI: 10.1038/s41596-024-01023-w

[14] Kang, Y., Ahn, J., Cosme, D., McGowan, A., Mwilambwe-tshilobo, L., **Zhou, D.**, Jovanova, M., Stanoi, O., Mucha, P.J., Ochsner, K.N., Bassett, D.S., Lydon-Staley, D. & Falk, E.B. (2023). Frontoparietal functional connectivity moderates the link between time spent on social media and subsequent negative affect in daily life. ***Scientific Reports***. DOI: 10.1038/s41598-023-46040-z

[13] 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. (2023). Alprazolam modulates persistence

energy during emotion processing in first-degree relatives of individuals with schizophrenia: a network control study. *Molecular Psychiatry*. DOI: 10.1038/s41380-023-02121-z

- [12] **Zhou, D.**, Kang, Y., Cosme, D., Jovanova, M., He, X., Mahadevan, A., Ahn, J., Stanoi, O., Brynildsen, J.K., Cooper, N., Cornblath, E.J., Parkes, L., Mucha, P., Ochsner, K., Lydon-Staley, D., Falk, E., & Bassett, D.S. (2023). Mindful Attention Promotes Control of Brain Network Dynamics for Self-Regulation and Discontinues the Past from the Present. *PNAS*. DOI: 10.1073/pnas.220107411
- [11] Patankar, S.P., **Zhou, D.**, Lynn, C.W., Kim, J., Ouellet, M., Ju, H., Zurn, P., Lydon-Staley, D.M., & Bassett, D.S. (2022). Curiosity as filling, compressing, and reconfiguring knowledge networks. *Collective Intelligence*. *arXiv*: 10.48550/arXiv.2204.01182
- [10] Richie-Halford, A., Cieslak, M., Ai, L., Caffarra, S., Covitz, S., Franco, A.R., Karipidis, I.I., Kruper, J., Milham, M., Avelar-Pereira, B., Roy, E., Sydnor, V.J., Yeatman, J.D., [The Fibr Community Science Consortium, including **Zhou, D.**], Satterthwaite, T.D., and Rokem, A. (2022). An open, analysis-ready, and quality controlled resource for pediatric brain white-matter research. *Scientific Data*. DOI: 10.1038/s41597-022-01695-7
- [9] Ju, H., **Zhou, D.**, Blevins, A.S., Lydon-Staley, D.M., Kaplan, J., Tuma, J.R., Bassett, D.S. (2022). Historical growth of concept networks in Wikipedia. *Collective Intelligence*. DOI: 10.1177/26339137221109839
- [8] Weninger, L., Srivastava, P., **Zhou, D.**, Kim, J.Z., Cornblath, E.J., Bertolero, M.A., Habel, U., Merhof, D., and Bassett, D.S. (2022). The information content of brain states is explained by structural constraints on state energetics. *Physical Review E*. DOI: 10.1103/PhysRevE.106.014401
- [7] Adebimpe, A., Bertolero, M.A., [33 others, including **Zhou, D.**, and the ALLFTD Consortium], & Satterthwaite, T.D. (2022). ASLPrep: A Platform for Processing of Arterial Spin Labeled MRI and Quantification of Regional Brain Perfusion. *Nature Methods*. DOI: 10.1038/s41592-022-01458-7
- [6] **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. (2021). Efficient Coding in the Economics of Human Brain Connectomics. *Network Neuroscience*. DOI: 10.1162/netn.a\_00223
- [5] Wang, X., Dworkin, J.D., **Zhou, D.**, Stiso, J., Falk, E.B., Bassett, D.S., Zurn, P., Lydon-Staley, D.M. (2021). Gendered citation practices in the field of communication. *Annals of the International Communication Association*. DOI: 10.31234/osf.io/ywrcq
- [4] 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
- [3] 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
- [2] **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
- [1] **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,  
COMMENTARY, &  
BOOK CHAPTERS

- [6] **Zhou, D.** & Bornstein, A.M. (2023). Expanding horizons in reinforcement learning for curious exploration and creative planning. *Behavioral and Brain Sciences*. *PsyArXiv*: 10.31234/osf.io/bhcwp
- [5] Zurn, P., **Zhou, D.**, Lydon-Staley, D.M., & Bassett, D.S. (2022). Edgework: Viewing curiosity as fundamentally relational. In Cogliati Dezza, I., Wu, C., & Schulz, E. (Eds.). *The Drive for Knowledge: The Science of Human Information Seeking*. Cambridge University Press. *PsyArXiv*: 10.31234/osf.io/crzae
- [4] **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
- [3] 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
- [2] Rapoport, J. L., **Zhou, D.**, & Ahn, K. (2020). Intellectual disabilities. *New Oxford Textbook of Psychiatry, 3rd edition*. Oxford University Press, USA. ISBN: 9780198713005
- [1] **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

REFEREED  
CONFERENCE  
PAPERS

- [7] **Zhou, D.**, Patankar, S., Gerlach, M., Lydon-Staley, D.M., Zurn, P., & Bassett, D.S. Architectural styles of curiosity in global Wikipedia mobile app readership (virtual). *11th Annual Wiki Workshop - Research Track*. June 20, 2024.
- [6] **Zhou, D.**, Noh, S., Yassa, M.A., Bornstein, A.M. Pattern separation using compressed and semantic representations of memory. *Conference on Cognitive Computational Neuroscience*. Massachusetts Institute of Technology, Boston, Massachusetts August 6-9, 2024.
- [5] Yoo, J.\*, **Zhou, D.**, Bornstein, A.M. Latent cause inference as an efficient and flexible learning rule for cognitive graphs. *Conference on Cognitive Computational Neuroscience*. Massachusetts Institute of Technology, Boston, Massachusetts August 6-9, 2024.
- [4] **Zhou, D.**, Tseytlin, I.\*, Satterthwaite, T.D., & Bassett, D.S. (2023). Predictive coding from compression, control, and recurrent connectivity in human brain networks. *Conference on Cognitive Computational Neuroscience*. Oxford University, Oxford, England. August 24-27, 2023.
- [3] Kang, Y., Ahn, J., Cosme, D., McGowan, A., Mwilambwe-tshilobo, L., **Zhou, D.**, Jovanova, M., Stanoi, O., Mucha, P.J., Ochsner, K.N., Bassett, D.S., Lydon-Staley, D. & Falk, E.B. Frontoparietal system functional connectivity moderates the within-day associations between increases in time spent on social media and subsequent negative affect. *73rd Annual International Communication Association Conference*. Toronto, CA. May 25-29, 2023.

↪ Promising Paper Award

- [2] **Zhou, D.**, Kim, J.Z., Pines, A., Sydnor, V.J., Roalf, D.R., Detre, J.A., Gur, R.C., Gur, R.E., Satterthwaite, T.D., & Bassett, D.S. Compression supports low-dimensional representations of behavior across neural circuits. *NeurIPS 2022 Workshop on Information-Theoretic Principles in Cognitive Systems*. New Orleans, LA. December 3, 2022.

↳ Selected for oral talk (< 10% submissions)

- [1] Wang, X., Lydon-Staley, D.M., Stiso, J.A., **Zhou, D.**, Falk, E.B., Bassett, D.S., Zurn, P. Gendered citation practices in the field of communication. *71st Annual International Communication Association Conference*. (virtual due to COVID-19). May 27-31, 2021.

↳ Communication & Science Biology Top Paper Award

## IN PREP

- [5] **Zhou, D.**, Noh, S., Yassa, M.A., & Bornstein, A.B. A lossy compression account of pattern separation.
- [4] **Zhou, D.**, Ahn, J., Lydon-Staley, D.M., Falk, E.B., Bassett, D.S., & Ruscio, A. Network control dynamics of persistent thought patterns in depression and anxiety.
- [3] **Zhou, D.**, Tseytlin, I.\*, Satterthwaite, T.D., & Bassett, D.S. Predictive coding from compression, control, and recurrent connectivity in human brain networks.
- [2] **Zhou, D.**, Kim, J.Z., Pines, A., Sydnor, V.J., Roalf, D.R., Gur, R.C., Gur, R.E., Satterthwaite, T.D., & Bassett, D.S. Integrating sensation to cognition in human brain networks.
- [1] **Zhou, D.**, Lydon-Staley, D.M., Mucha, P., Falk, E., Ochsner, K., & Bassett, D.S. Cognitive control & network control: Current tensions and future promise.

## FUNDING & AWARDS

### FUNDING

2023-26	Hewitt Research Fellow & Cunningham Scholar George E. Hewitt Foundation for Medical Research ↳ \$261,000
2021-23	NIH F31 National Research Service Award Grant # F31MH126569 Brain Network Maturation and Executive Dysfunction Spanning Diagnostic Categories of Psychopathology ↳ \$80,138

### AWARDS & FELLOWSHIPS

2023-2026	Hewitt Research Fellow & Cunningham Scholar	UC Irvine
2021-23	F31 National Research Service Award	NIH
2015-17	Intramural Research and Training Award	NIH
2015	Departmental Honors in Psychology	UMaryland
2015	Departmental Honors in Philosophy	UMaryland
2010-12	College Park Scholar in Global Public Health	UMaryland
2010-14	University of Maryland President's Scholarship	UMaryland

## STIPENDS

2024	Summer Institute in Neuroscience Mentor Stipend	UC Irvine
2023	Biomedical Graduate Studies Course Funds	UPenn
2022	Biomedical Graduate Studies Travel Funds	UPenn
2019	National Academy of Sciences Travel Award	NAS
2018-20	Language and Communication Sciences Stipend	UPenn
2013	College Park Scholars Co-Curricular Scholarship	UMaryland
2011	Ling Ho Anita K'ung Tong Scholarship	UMaryland

## PRESENTATIONS

## TALKS

- [2] *11th Annual Wiki Workshop - Research Track* (virtual). June 20, 2024. Architectural styles of curiosity in global Wikipedia mobile app readership.
- [1] *NeurIPS 2022* Workshop on Information-Theoretic Principles in Cognitive Systems. New Orleans, LA. December 3, 2022. Compression supports low-dimensional representations of behavior across neural circuits. [\[link\]](#)  
 $\hookrightarrow$  (< 10% submissions selected)

## INVITED TALKS

2025	<b>Santa Fe Institute</b>	SFI
2025	<b>Wikimedia Research Showcase</b>	YouTube
2025	Cognitive Science Colloquium	UC Irvine
2024	Walter Eckhart Hewitt Foundation Fellows Symposium	Salk Institute
2023	<b>International Research Training Group</b>	RWTH Aachen
2023	<b>Yassa Lab; Bornstein Lab</b>	UC Irvine
2023	<b>Poldrack Lab</b>	Stanford
2023	<b>Astle Lab</b>	Cambridge
2019	<b>Brain Produces the Mind By Modeling</b>	NAS
2017	<b>Ninth Annual Julius Axelrod Symposium</b>	NIH

## ABSTRACTS

\* = mentee

† = co-first

- [24] Irizarry-Martinez, G.[\*], Leonard, B.T.[\*], Adams, J.N., **Zhou, D.**, Granger, S., McMillan, L., Yassa, M.A. Resting-State Connectivity between the Locus Coeruleus and the Hippocampus differs by Sex and Depression diagnosis. *American College of Neuropsychopharmacology*. Phoenix, Arizona. December 8-11, 2024.
- [23] Leonard, B.T.[\*], Rasmussen, J, **Zhou, D.**, Small, S.L., Sandman, C.A., Stern, H., Baram, T.Z., Glynn, L.M., Poggi-Davis, E., Yassa, M.A. Early life adversity and paraventricular nucleus of thalamus network connectivity interact in the neurobiology of adolescent mental health. *American College of Neuropsychopharmacology*. Phoenix, Arizona. December 8-11, 2024.
- [22] Mohammed, N., **Zhou, D.**, Bassett, D.S., Zurn, P., Lingel, J., Lydon-Staley, D.M. Dancing with Curiosity: A Case Study on the Role of Curiosity in the Creative Process. *Society for Psychology of Aesthetics, Creativity, and the Arts*. New Haven, Connecticut. March 13-15, 2025.
- [21] Dinh, E.[\*, †], **Zhou, D.**[†], Guo, J., Noh, S.M., Cooper, K., Bornstein, A.M. Autoencoder models of human graph learning reveal that sparse and dense representations differentially support planning and recall. *Society for Neuroscience*. Chicago, Illinois. October 5-9, 2024.

- [20] **Zhou, D.**, Noh, S., Yassa, M.A., Bornstein, A.M. Pattern separation using compressed and semantic representations of memory. *Conference on Cognitive Computational Neuroscience*. Boston, Massachusetts. August 6-9, 2024.
- [19] Yoo, J.[\*], **Zhou, D.**, Bornstein, A.M. Latent cause inference as an efficient and flexible learning rule for cognitive graphs. *Conference on Cognitive Computational Neuroscience*. Boston, Massachusetts. August 6-9, 2024.
- [18] Irizarry-Martinez, G.[\*], Leonard, B.T., Adams, J.N., **Zhou, D.**, Granger, S., McMillan, L., Yassa, M.A. Associations between resting-state functional connectivity of the locus coeruleus and anhedonia symptoms in individuals with depression. *International Behavioral Neuroscience Society*. Panama City, Panama. June 11-16, 2024.
- [17] Parkes, L., Kim, J.Z., Stiso, J., Brynildsen, J.K., Cieslak, M., Covitz, S., Gur, R.E., Gur, R.C., Pasqualetti, F. Shinohara, R.T., Stiso, J., **Zhou, D.**, Satterthwaite, T.D., & Bassett, D.S. (2023). Network control theory (NCT) for neuroscientists: a Python-based protocol. *Organization for Human Brain Mapping*. Seoul, South Korea. June 23 - June 27, 2024.
- [16] **Zhou, D.**, Tseytlin, I.[\*], Satterthwaite, T.D., & Bassett, D.S. (2023). Predictive coding from compression, control, and recurrent connectivity in human brain networks. *Conference on Cognitive Computational Neuroscience*. Oxford University, Oxford, England. August 24-27, 2023.
- [15] Gataviņš, M.[\*], Luo, A., Sydnor, V.J., Shafiei, G., **Zhou, D.**, Gur, R.E., Gur, R.C., Mackey, A.P., Satterthwaite, T.D., Keller, A.S. (2023). Functional network development along the sensorimotor-association axis. *Flux Society*. Santa Rosa, California. September 6-9, 2023.
- [14] **Zhou, D.**, Patankar, S., Gerlach, M., Lydon-Staley, D.M., Zurn, P., & Bassett, D.S. Dynamics Of Curiosity And Complexity In Wikipedia Readers. *Curiosity, Creativity and Complexity conference* (unable to attend). Columbia University, New York City, New York. May 23-25 2023.
- [13] **Zhou, D.**, Kim, J.Z., Pines, A., Sydnor, V.J., Roalf, D.R., Detre, J.A., Gur, R.C., Gur, R.E., Satterthwaite, T.D., & Bassett, D.S. Compression supports low-dimensional representations of behavior across neural circuits. *NeurIPS 2022 Workshop on Information-Theoretic Principles in Cognitive Systems*. New Orleans, LA. December 3, 2022.
- [12] Brynildsen, J. K., **Zhou, D.**, Cosme, D., Jovanova, M., He, X., Mucha, P.J., Ochsner, K.N., Lydon-Staley, D.M. , Falk, E. B., Bassett, D.S. Regulation of alcohol cue reactivity in a social context. *Society for Neuroscience*. San Diego, CA. November 12, 2022.
- [11] **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. Network Fidelity Improves with Brain Network Maturation and Executive Function. *Flux Society*. Paris, France. September 6-9, 2022.
- [10] **Zhou, D.**, Kim, J.Z., Pines, A., Sydnor, V.J., Roalf, D.R., Detre, J.A., Gur, R.C., Gur, R.E., Satterthwaite, T.D., & Bassett, D.S. Communication and compression principles integrate sensation to cognition in human brain networks. *Organization for Human Brain Mapping*. Glasgow, Scotland. June 19-23, 2022.
- [9] **Zhou, D.**, Kang, Y., Cosme, D. Jovanova, M., He, X., Mahadevan, A., Stanoi, O., Brynildsen, J.K., Cooper, N., Cornblath, E.J., Parkes, L., Mucha, P., Ochsner, K., Lydon-Staley, D., Falk, E., and Bassett, D.S. Mindfulness Promotes Control of Network Dynamics for Self-Regulation and Updates the Past to Present. *Organization for Human Brain Mapping*. Glasgow, Scotland. June 19-23, 2022.



- [8] Ju, H., **Zhou, D.**, Blevins, A.S., Lydon-Staley, D.M., Kaplan, J., Tuma, J.R., Bassett, D.S. The network structure of scientific revolutions. *American Physical Society March Meeting* (virtual due to COVID-19). March 15-19, 2021.
- [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. Efficient Coding in the Economics of Human Brain Connectomics. *Organization for Human Brain Mapping*. Montreal, CA (virtual due to COVID-19). June 23-July 3, 2020.
- [6] **Zhou, D.**, Lydon-Staley, D., Zurn, P., Bassett, & D.S. 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. May 1-3, 2019.
- [5] **Zhou, D.**, Liu, S., Zhou, X., Berman, R.A., Broadnax, D.D., Rapoport, J.L., & Thomas, A.G. 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. April 13, 2017.
- [4] **Zhou, D.**, Liu, S., Zhou, X., Berman, R.A., Broadnax, D.D., Rapoport, J.L., & Thomas, A.G. 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. May 18-20, 2017.
- [3] **Zhou, D.**, Liu, S., Berman, R.A., Broadnax, D.D., Rapoport, J.L., & Thomas, A.G. 7-Tesla MRI Reveals Regional Hippocampal Deficits in Childhood-Onset Schizophrenia. *American College of Neuropsychopharmacology*, Hollywood, Florida. In *Neuropsychopharmacology*. December 4-8, 2016.
- [2] **Zhou, D.**, Liu, S., Berman, R.A., Broadnax, D.D., Rapoport, J.L., & Thomas, A.G. 7-Tesla MRI reveals regional hippocampal volume deficits of dentate gyrus in childhood-onset schizophrenia. *Society for Neuroscience*, San Diego, California. November 12-16, 2016.
- [1] **Zhou, D.**, Gochman, P., Broadnax, D.D., Rapoport, J.L., & Ahn, K. 15q13.3 duplication in two patients with childhood-onset schizophrenia. *Society of Biological Psychiatry*, Atlanta, Georgia. May 12-14, 2016.

## TEACHING

### TEACHING

#### ASSISTANT

- |      |  |                     |
|------|--|---------------------|
| 2022 | Goals of Scientific Inquiry; or, On the Curiosity of Beasts<br>(Student evaluation of TA: 3.6/4.0) | (with Dani Bassett) |
| 2020 | Curiosity: Ancient and Modern Thinking About Thinking<br>(Student evaluation of TA: not rated)     | (with Dani Bassett) |
| 2019 | Computational Neuroscience Lab<br>(Student evaluation of TA: 3.7/4.0)                              | (with Nicole Rust)  |

#### LECTURER

- |         |   |                         |
|---------|---|-------------------------|
| 2023-24 | Advanced Topics in Graph Analysis (Johns Hopkins University, School of Engineering Lifelong Learning, Data Science) | (with Will Gray-Roncal) |
|---------|---|-------------------------|

## GUEST LECTURER

2022	Goals of Scientific Inquiry (UPenn Bioengineering 571)	(with Dani Bassett)
2019-20	Network Neuroscience (UPenn Bioengineering 566)	(with Dani Bassett)
2019	Computational Neuroscience Lab (UPenn Biological Basis of Behavior 310)	(with Nicole Rust)

## STUDENTS ADVISED

[8]	Bianca Leonard	UC Irvine, MD/PhD student in Neurobiology and Behavior Network growth charts with early-life unpredictability
[7]	Destiny Edens	NC A&T State University, Summer Student Network structure in psychiatric taxonomy
[6]	Emily Dinh	UC Irvine, Research Specialist Cognitive graphs, autoencoders
[5]	Jungsun Yoo	UC Irvine, PhD student in Cognitive Science Cognitive graphs, latent cause models
[4]	Gimarie Irizarry Martnez	UC Irvine, PhD student in Neurobiology and Behavior Anhedonia; reinforcement learning; value-mediated memory
[3]	Ivan Tseytlin	Haverford College, B.S. Physics; Computer Science 2023 Network control theory (Daylight Computer Company)
[2]	Samantha Simon	University of Pennsylvania, B.S. Physics 2023 Diversity in science; semantic networks (Accenture AI)
[1]	Mark Choi	University of Pennsylvania, B.S. Computer Science 2021 Network structure in mathematics (Meta)

## SERVICE

MENTORSHIP	2024–	Irvine Summer Institute in Neuroscience Program, <a href="#">[link]</a>
		Destiny Edens NC A&T State University, Neuroscience 2024
	2020–21	MindCORE Step-Ahead Mentorship Program, <a href="#">[link]</a>
		Mārtiņš M. Gataviņš University of Pennsylvania, Neuroscience 2024
	2019–21	Upward Bound: Research Fridays, <a href="#">[link]</a>

## JOURNAL REVIEWER

Biological Psychiatry | Cerebral Cortex | Communications Biology | Frontiers in Psychiatry | Hippocampus | IEEE: Transactions on Network Science and Engineering | Network Neuroscience

## CONFERENCE REVIEWER

Cognitive Computational Neuroscience *2x* | NeurIPS (Information-Theoretic Principles in Cognitive Systems workshop) | Web Conference (Wiki Workshop) *2x*



## CO-ORGANIZER & PROGRAM COMMITTEE

Innovators in Cognitive Neuroscience Symposia | Web Conference (Wiki Workshop)

## HACKATHONS

Stiso, J.\* & **Zhou, D.\*** (2020). *Tools for Combating Citation Bias*. Organization for Human Brain Mapping Hackathon, Montreal, Canada. June 16–18, 2020. [\[link\]](#)

## INVITED TALKS

Citation Diversity Tutorial, Annual Meeting for the Neuroscience Training Grant; Vision Training Grant; and Computational Approaches to the Neuroscience of Audition Training Grant, University of Pennsylvania. June 7, 2021.

Panelist, Post-Baccalaureate Research Experiences, University of Maryland. March 30, 2017.

## DIVERSITY, EQUITY, & INCLUSION

- 2019– Creator/Maintainer, Citation Diversity Statement Code Notebook [\[link\]](#)
- Used and cited in > 100 articles across > 30 journals.
  - Contributions from researchers across 11 universities, including UPenn, MIT, Columbia, University of Michigan, Leiden University, and Technical University of Munich.
  - Highlighted by **Nature**, **Cell**, and **Science** journals.
- 2024 Summer Institute in Neuroscience
- University of California-Historically Black Colleges and Universities (UC-HBCU) Initiative.
- 2022 Kamen’s Lens. Rebecca Kamen, S.J. Fowler, Dale Zhou. *Dyslexic Dictionary*. Organized and curated by Gil Gershoni, Tasmin Smith, and Ted Gioia. Arion Press Gallery, 1802 Hays Street, The Presidio, San Francisco, CA. October 22–December 22, 2022. [\[link\]](#) [\[video 1\]](#) [\[video 2\]](#)
- 2020–22 Organizing Committee, Innovators in Cognitive Neuroscience Symposia. [\[link\]](#)
- 2020 Stiso, J.\* & **Zhou, D.\*** (2020). *Tools for Combating Citation Bias*. Organization for Human Brain Mapping Hackathon, Montreal, Canada. June 16–18, 2020. [\[link\]](#)
- 2020–21 Web Developer, Black in STEM in Academia

## OUTREACH

## ORGANIZATIONS

2024–	Mentor	UC Irvine
	<b>Summer Institute in Neuroscience</b>	
2020–22	Organizing Committee	UPenn
	<b>Innovators in Cognitive Neuroscience</b>	
2020–21	Web Developer	UPenn
	Black in STEM in Academia	
2019–20	Organizer, Web Developer	UPenn
	Penn Network Visualization program	
2019–21	Apprentice Chief	UPenn
	<b>Upward Bound: Research Fridays</b>	
2019–20	Committee member	UPenn
	APICAL Service Award	
2017–20	Section Chief	UPenn
	<b>Brains in Brief science communication</b>	
2017–18	Founder	UMaryland
	Psychology Honors Alumni	
2014–15	Vice President	UMaryland
	Philosophy Club	

## ART EXHIBITIONS

- [2] Kamen’s Lens. Rebecca Kamen, S.J. Fowler, Dale Zhou. *Dyslexic Dictionary*. Organized and curated by Gil Gershoni, Tasmin Smith, and Ted Gioia. Arion Press Gallery, 1802 Hays Street, The Presidio, San Francisco, CA. October 22–December 22, 2022. [\[link\]](#) [\[video 1\]](#) [\[video 2\]](#)
- [1] Sparking Curiosity. Dale Zhou, David Lydon-Staley, Perry Zurn, and Dani Bassett. *Reveal: The Art of Reimagining Scientific Discovery*. Organized and curated by Rebecca Kamen and Sarah Tanguy. Museum at the Katzen Arts Center, American University, Washington, D.C., August 29–December 12, 2021. [\[link\]](#)

## ART CATALOGS

The Connected Brain. Human Brain Mapping Conference. ISBN 9798357985361  
– Contribution to collection

## SELECTED PRESS

### ARTICLES

- [10] Gary Stix (Ed. Sarah Frasier) (December 24, 2024) *Wikipedia Searches Reveal Differing Styles of Curiosity*. **Scientific American**
- [9] Nathi Magubane (October 28, 2024) *Studying Wikipedia browsing habits to learn how people learn*. **Penn Today**
- [8] Bronwyn Thompson (October 26, 2024) *What your Wikipedia browsing style says about you*. **New Atlas**
- [7] Sarah Polkinghorne (October 25, 2024) *Going down a Wikipedia rabbit hole? Science says youre one of these three types*. **The Conversation**
- [6] Helena Kudiabor (October 24, 2024) *Study reveals three ways to disappear down a Wikipedia rabbit hole*. **Nature**
- [5] Natalia Gass (February 17, 2023) *Neural states during mindful attention*. **Nature Mental Health**.
- [4] Nathi Magubane (January 26, 2023) *Through the lens: A digital depiction of dyslexia*. **Penn Today**.

- [3] Diana Kwon (March 22, 2022) *The rise of citational justice: how scholars are making references fairer.* [\*Nature\*](#).
- [2] Melissa Pappas (January 26, 2021) *Researchers measure different types of curiosity studying hunters and busybodies.* [\*Penn Today\*](#).
- [1] Melissa Pappas (January 12, 2021) *Studying Hunters and Busybodies, Penn and American University Researchers Measure Different Types of Curiosity.* [\*Penn Engineering Today\*](#).

## RADIO & PODCASTS

- [2] Dale Drinkwater (November 1, 2024). Wikipedia and Curiosity. *ABC NewsRadio Australia*
- [1] Sarah Crespi, Kai Kupferschmidt (October 31, 2024) *The challenges of studying misinformation, and what Wikipedia can tell us about human curiosity.* [\*Science \(podcast\)\*](#)

## CODE

- [4] **Zhou, D.** (2022). Sparking Curiosity, [\[link\]](#)
- [3] **Zhou, D.**, Stiso, J., Cornblath, E.J., Teich, E.G., Blevins, A.S., Oudyk, K., Cleanthis, M., Urai, A., Matelsky, J., Virtualmario, Camp, C., Alacantha Castillo, R., Saxe, R., Dworkin, J.D., & Bassett, D.S. (2022). *Citation Diversity Statement and Code Notebook v1.1.3*. Zenodo. [DOI: 10.5281/zenodo.7375250](#)
- [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](#)

## TRAINING

### PROGRAMMING

R | Python | MATLAB | JavaScript | Bash

### NEUROIMAGING

Nipype | Freesurfer | ANTs | FSL | AFNI

### EXPERIMENTAL DESIGN

jsPsych, psiTurk, Prolific

### MODELING

Dynamics on networks | Temporal networks | Multi-layer networks | Agent-based modeling | Evolutionary computation | Control theory | Information theory | Natural language processing | Generalized additive models

### WORKSHOPS

Cognitive Foundations in Decision-Making. Rabat, Morocco. July 22-27, 2024

Unity and Virtual Reality for Research Workshop. University of California, Irvine. June 13, 2024

Collective Intelligence: Foundations + Radical Ideas symposium & short course.  
Santa Fe, NM. June 19, 2023

NeurIPS 2022 Workshop on Information-Theoretic Principles in Cognitive Systems workshop. New Orleans, LA. December 3, 2022

Summer Workshop in Cognitive Electrophysiology, Philadelphia, PA (virtual).  
August 4-13, 2020.

Computational Psychiatry Summer Course, New York, NY. July 29-30, 2019.