

# David G. Clark

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(Last updated: March 18, 2026)

## Current Position

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[Kempner Research Fellow, Harvard University](#)  
Cambridge, MA

September 2025–Present

Postdoctoral researcher at the Kempner Institute for the Study of Natural and Artificial Intelligence at Harvard University

Key mentors: Haim Sompolinsky, Cengiz Pehlevan

## Education

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[Columbia University](#)  
New York, NY

August 2019–August 2025

PhD in Neurobiology and Behavior

Thesis: *Theories of Structure, Dynamics, and Plasticity in Neural Circuits*

Primary advisor: Larry F. Abbott

Key mentors: Ashok Litwin-Kumar, Richard Axel (Columbia), Haim Sompolinsky (Harvard)

[UC Berkeley](#)  
Berkeley, CA

August 2013–December 2017

BA in Physics, Computer Science

Research Assistant, LBNL Kristofer Bouchard Lab, 2017–2019

## Publications and Preprints

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- **Clark, D.G.**\*, Bordelon, B.\* , Zavatone-Veth, J.A.\* , and Pehlevan, C., 2026. Structure, disorder, and dynamics in task-trained recurrent neural circuits. *bioRxiv*.
- Marschall, O., **Clark, D.G.**, and Litwin-Kumar, A., 2025. A theory of multi-task computation and task selection. *bioRxiv*.
- Wakhloo, A.J., **Clark, D.G.**, and Abbott, L.F., 2025. Associative synaptic plasticity creates dynamic persistent activity. *bioRxiv*.
- **Clark, D.G.**, 2025. Transient dynamics of associative memory models. *arXiv:2506.05303*
- **Clark, D.G.**, Abbott, L.F., and Sompolinsky, H., 2025. Symmetries and continuous attractors in disordered neural circuits. *bioRxiv*.
- **Clark, D.G.** and Sompolinsky, H., 2025. Simplified derivations for high-dimensional convex learning problems. *SciPost Physics: Lecture Notes*.
- **Clark, D.G.**, Marschall, O.E., van Meegen, A., and Litwin-Kumar, A., 2025. Connectivity structure and dynamics of nonlinear recurrent neural networks. *Physical Review X*.
- **Clark, D.G.** and Beiran, M., 2025. Structure of activity in multiregion recurrent neural networks. *PNAS*.
- **Clark, D.G.** and Abbott, L.F., 2024. Theory of coupled neuronal-synaptic dynamics. *Physical Review X*.
  - Featured in [Physics viewpoint](#) (~100 papers out of >20,000 featured annually)

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\*Equal contribution.

- **Clark, D.G.**, Abbott, L.F., and Litwin-Kumar, A., 2023. Dimension of activity in random neural networks. *Physical Review Letters*.
- **Clark, D.G.**, Abbott, L.F., and Chung, S., 2021. Credit assignment through broadcasting a global error vector. *Advances in Neural Information Processing Systems*.
- Fischler-Ruiz, W., **Clark, D.G.**, Joshi, N.R., Devi-Chou, V., Kitch, L., Schnitzer, M., Abbott, L.F., and Axel, R., 2021. Olfactory landmarks and path integration converge to form a cognitive spatial map. *Neuron*.
- **Clark, D.G.\***, Livezey, J.A.\*, and Bouchard, K.E., 2019. Unsupervised discovery of temporal structure in noisy data with Dynamical Components Analysis. *Advances in Neural Information Processing Systems*.
- Carney, R.M., Bouchard, K.E., Calafiura, P., **Clark, D.G.**, Donofrio, D.D., Garcia-Sciveres, M., and Livezey, J.A., 2017. Neuromorphic Kalman filter implementation in IBM's TrueNorth. *Journal of Physics: Conference Series* (Vol. 898).

## Invited Talks

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- ICMNS mini-symposium: "Recent Advances in the Study of Disorder in Recurrent Neural Networks," Montreal (June 2026)
- Dynamical Systems Seminar, Department of Mathematics and Statistics, Boston University (March 2026)
- Computational Neuroscience Seminar, Courant Institute, New York University (February 2026)
- van Vreeswijk Theoretical Neuroscience Seminar, virtual (January 2026)
- Theoretical Physics for Artificial Intelligence, Aspen Center for Physics (January 2026)
- Simons Collaboration on the Physics of Learning and Neural Computation, kickoff workshop, Stanford University (November 2025)
- Gatsby Tri-Centre Meeting, University College London (June 2025)
- Shervin Safavi group, TU Dresden (virtual, June 2025)
- CoSyNe workshop: "Collectively Emerged Timescales," Montreal (March 2025)
- Cengiz Pehlevan group, Harvard University (September 2024)
- Xiao-Jing Wang group, New York University (September 2024)
- Youth in High Dimensions, International Centre for Theoretical Physics, Trieste (May 2024)
- Hakan Türeci group, Princeton University (May 2024)
- University of Washington Theoretical Neuroscience Journal Club (virtual, February 2024)
- Rutgers 125th Statistical Mechanics Conference (December 2023)
- Bernstein Conference workshop: "Relationship Between Multi-level Network Connectivity and Neural Dynamics," Berlin (September 2023)
- Junior Theoretical Neuroscientist Workshop, Flatiron Center for Computational Neuroscience (June 2023)
- Ilya Nemenman lab, Emory University (April 2023)
- Theoretical Neuroscience Journal Club organized by Xaq Pitkow (virtual, April 2023)
- Wulfram Gerstner group, EPFL (February 2023)

- Les Houches workshop: “Toward a Theory of Artificial and Biological Neural Networks” (February 2023)
- Center for the Physics of Biological Function, Princeton University (October 2022)
- Redwood Center for Theoretical Neuroscience, UC Berkeley (September 2022)

## Honors

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<a href="#">Kempner Research Fellowship</a>	2025
Three-year independent research fellowship through the Kempner Institute for the Study of Natural and Artificial Intelligence at Harvard University	
<a href="#">Alternate, Harvard Society of Fellows, Junior Fellowship</a>	2025
Selected as an alternate candidate following interviews	
<a href="#">Kavli Institute Graduate-Student Scholar</a>	2024–2025
Columbia University, Zuckerman Institute (institutional appointment)	

## Service and Mentoring

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<a href="#">Reviewer</a>	
CoSyNe, PRX Life, PRL, JSTAT, Neuron	
<a href="#">DimensionaliTea</a>	Founded November 2022
Founded and organized a tea-talk series in the Center for Theoretical Neuroscience at Columbia	
<a href="#">Black Undergraduate Mentorship Program (BUMP)</a>	January 2022–January 2023
Mentored an undergraduate student studying biology at Columbia	
<a href="#">Zuckerman Institute Gender Inclusion Group (ZIGI)</a>	June 2022–December 2022
Helped organize a speaker series	