

*Curriculum Vitae*  
Daniel Toker  
danieltoker@g.ucla.edu

## EDUCATION

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- Ph.D. in neuroscience, University of California, Berkeley, 2019
- B.A. in philosophy, certificate in neuroscience, Princeton University, *Magna Cum Laude*, 2013

## AWARDS & HONORS

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- 2023: NIH Kirschstein-NRSA F32 Fellowship
- 2022: Excellence in Research Award, UCLA Life Sciences
- 2020: Emmy nomination for Outstanding Writing (for *Mind Field*, a documentary series about the brain)
- 2019: Outstanding Graduate Student Instructor Award
- 2016: National Science Foundation (NSF) Graduate Research Fellowship
- 2013: George A. Miller Prize in Cognitive Science
- 2013: John Martyn Warbeke 1903 Prize in Metaphysics & Epistemology
- 2013: Tomb Prize for a thesis on the philosophy of time
- 2012: Sandra & Jeremiah Lambert '55 Award for Undergraduate Neuroscience

## RESEARCH POSITIONS

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- Postdoctoral scientist: Neural Circuit Development and Dynamics Lab, UCLA, 2022-Present
- Postdoctoral scientist: Higher Cognition, Language, & Consciousness Lab, UCLA, 2020-Present
- Graduate researcher: D'Esposito Lab, UC Berkeley, 2016—2019
- Clinical Research Associate: Halo Neuroscience, San Francisco, CA, 2014—2015
- Lab Manager: Cognitive Affective Neuroscience Lab, UC Berkeley, 2013—2014
- Research Assistant: Koch Laboratory, Caltech, June 2013—October 2013
- Research Assistant: Computational Memory Lab, Princeton University, 2010—2013

## PUBLICATIONS

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- **Toker, D.**, Müller, E., Miyamoto, H., Riga, M.S., Lladó-Pelfort, L., Yamakawa, K., Artigas, F., Shine, J.M., Hudson, A., Pouratian, N. and Monti, M., 2023. Criticality supports cross-frequency cortical-thalamic information transfer during conscious states. *bioRxiv*.
- Frohlich, J., Chiang, J.N., Mediano, P.A., Nespeca, M., Saravanapandian, V., **Toker, D.**, Dell'Italia, J., Hipp, J.F., Jeste, S.S., Chu, C.J. and Bird, L.M. (2022). "Neural complexity is a common denominator of human consciousness across diverse regimes of cortical dynamics." *Communications Biology*.
- **Toker, D.**, Pappas, I., Lendner, J.D., Frohlich, J., Mateos, D.M., Muthukumaraswamy, S., Carhart-Harris, R., Paff, M., Vespa, P.M., Monti, M.M. Sommer, F.T., Knight, R.T., and

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- D'Esposito, M. (2022). "Consciousness is supported by near-critical slow cortical electrodynamics." *Proceedings of the National Academy of Sciences*.
- Frohlich, J., **Toker, D.**, & Monti, M. M. (2021). "Consciousness among delta waves: a paradox?" *Brain*.
  - Luppi, A. I., Cain, J., Spindler, L. R., Górska, U. J., **Toker, D.**, Hudson, A. E., Brown, E.N., Diringer, M.N., Stevens, R.D., Massimini, M., Monti, M.M., Stamatakis, E.A., & Boly, M. (2021). "Mechanisms Underlying Disorders of Consciousness: Bridging Gaps to Move Toward an Integrated Translational Science." *Neurocritical Care*.
  - DiCesare, J. A., Malekmohammadi, M., Sparks, H., **Toker, D.**, Monti, M., Hudson, A., & Pouratian, N. (2020). "Pallidocortical Connectivity Changes with Anesthetic Loss of Consciousness in Parkinson's Disease Patients." *Neurosurgery*.
  - **Toker, D.** Sommer, F., D'Esposito, M. (2020). "A simple method for detecting chaos in nature." *Communications Biology*.
  - Jarreau, P., Cancellare, I., Carmichael, B., Porter, L., **Toker, D.**, & Yammine, S. (2019). "Using Selfies to Challenge Public Stereotypes of Scientists." *PLoS ONE*.
  - **Toker, D.** and Sommer, F. (2019). "Information Integration In Large Brain Networks." *PLoS Computational Biology*.
  - Lositsky, O., Chen, J., **Toker, D.**, Honey, C.J., Poppenk, J., Hasson, U, & Norman, K. (2016). "Neural Pattern Change During Encoding of a Narrative Predicts Retrospective Time Estimates." *eLife*.
  - Bishop, S.J., Aguirre, G.K, Nunez-Elizalde, A.O., **Toker, D.** (2015) "Seeing the world through non-rose colored glasses: anxiety and the amygdala response to blended expressions." *Frontiers in Human Neuroscience*.

## POSTERS & TALKS

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- **Toker, D.**, Tobias, B., Lozano, K., Taitano-Johnson, C., Monti, M., Hudson, A., & Samarasinghe, R. "Human cortical organoids recapitulate hallmarks of anesthesia." Poster presented at the International Anesthesia Research Society Annual Meeting, April 2023.
- **Toker, D.** "Edge-of-Chaos Criticality Supports Neural Information Processing During Conscious States." Talk given at the Tiny Blue Dot Foundation Annual Meeting at the Allen Brain Institute, October 2022.
- **Toker, D.**, Sommer, F., & D'Esposito, M. "A simple method for detecting chaos (or its absence) in the brain." Poster presented at the Society for Neuroscience Annual Meeting, October 2019.
- **Toker, D.** & Sommer, F. "Integrated information in large brain networks." Poster presented at the Society for Neuroscience Annual Meeting, November 2017.
- **Toker, D.** "Putting Measures of Integrated Information to the Test." Talk given at the Northern California Consciousness Conference, March 2016.

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**PATENTS**

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- U.S. Patent 10,507,324: “System and method for individualizing modulation,” December 17, 2019.

**TEACHING EXPERIENCE**

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- Graduate Student Instructor, “Circuit, Systems, & Behavioral Neuroscience” (Instructors: Hillel Adesnik, Yang Dan, and Kristin Scott), University of California, Berkeley. January 2018—June 2018
- Graduate Student Instructor, “The Evolution of the Human Brain” (Instructor: Terrence Deacon), University of California, Berkeley. August 2016—January 2017

**PROFESSIONAL MEMBERSHIPS**

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- Society of Clinical Research Associates, July 2014—June 2015
- Society for Neuroscience, October 2015—Present