

**Dmitriy Aronov, Ph.D.**  
*Curriculum Vitae*

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Columbia University  
Jerome L. Greene Science Center  
3227 Broadway, Room L4-031  
New York, NY 10027

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Email:  
da2006@columbia.edu  
Office:  
(212) 853-1096

**Education**

**Massachusetts Institute of Technology**, Cambridge, MA 2005 – 2010  
McGovern Institute for Brain Research  
**Ph.D.** in Systems Neuroscience and Computational Methods

**Columbia University**, New York, NY 2001 – 2005  
The Fu Foundation School of Engineering and Applied Science  
**B.S.** in Applied Mathematics

**Employment**

**Columbia University Medical Center**, New York, NY 2017 – present  
Assistant Professor of Neuroscience  
Department of Neuroscience  
Zuckerman Mind Brain Behavior Institute

**Princeton University**, Princeton, NJ 2010 – 2016  
Postdoctoral Research Fellow  
Princeton Neuroscience Institute  
Laboratory of David W. Tank

**Massachusetts Institute of Technology**, Cambridge, MA 2005 – 2010  
Graduate Student  
McGovern Institute for Brain Research  
Laboratory of Michale S. Fee

**Columbia University**, New York, NY 2001 – 2005  
Undergraduate Research Assistant  
Department of Biological Sciences  
Laboratory of Rafael Yuste

**Mediterranean Institute of Neurobiology**, Marseilles, France 2004, 2005  
Visiting Researcher  
Research group of Rosa Cossart

**Weill Cornell Medical College**, New York, NY 1999 – 2001  
Research Student  
Department of Neurology  
Laboratory of Jonathan D. Victor

## Publications

- [1] Danish, H., **Aronov, D.**, and Fee, M.S. (2017) Rhythmic syllable-related activity in a songbird motor thalamic nucleus necessary for learned vocalizations. *PLoS One* 12(6): e0169568.
- [2] **Aronov, D.**, Nevers, R., and Tank, D.W. (2017) Mapping of a non-spatial dimension by the hippocampal/entorhinal circuit. *Nature* 543(7647): 719-722.
- [3] **Aronov, D.** and Tank, D.W. (2014) Engagement of the neural circuits underlying 2D spatial navigation in a rodent virtual reality system. *Neuron* 84(2): 442-56.
- [4] **Aronov, D.** and Fee, M.S. (2012) Natural changes in brain temperature underlie variations in song tempo during a mating behavior. *PLoS One* 7(10): e47856.
- [5] **Aronov, D.**, Veit, L., Goldberg, J.H., and Fee, M.S. (2011) Two distinct modes of forebrain circuit dynamics underlie temporal patterning in the vocalizations of young songbirds. *J Neurosci* 31(45): 16353-68.
- [6] Veit, L., **Aronov, D.**, and Fee, M.S. (2011) Learning to breathe and sing: development of respiratory-vocal coordination in young songbirds. *J Neurophysiol* 106(4): 1747-65.
- [7] Ölveczky, B., Otchy, T., Goldberg, J.H., **Aronov, D.**, and Fee, M.S. (2011) Changes in the neural control of a complex motor sequence during learning. *J Neurophysiol* 197(1): 32-47.
- [8] **Aronov, D.** and Fee, M.S. (2011) Analyzing the dynamics of brain circuits with temperature: design and implementation of a miniature thermoelectric device. *J Neurosci Methods* 197(1): 32-47.
- [9] **Aronov, D.**, Andalman, A.S., Fee, M.S. (2008) A specialized forebrain circuit for vocal babbling in the juvenile songbird. *Science* 320(5876): 630-4.
- [10] Crepel, V., **Aronov, D.**, Represa, A., Ben-Ari, Y., and Cossart R. (2007) A parturition-associated nonsynaptic coherent activity pattern in the developing hippocampus. *Neuron* 54(1): 105-20.
- [11] **Aronov, D.** and Victor, J.D. (2004) Non-Euclidean properties of spike train metric spaces. *Phys Rev E* 69(6 Pt 1): 061905.
- [12] Ikegaya, Y., Aaron, G., Cossart, R., **Aronov, D.**, Lampl, I., Ferster, D., and Yuste, R. (2004) Synfire chains and cortical songs: elastic temporal modules of cortical activity. *Science* 304(5670): 559-64.
- [13] Goldberg, J.H., Tamas, G., **Aronov, D.**, and Yuste, R. (2003) Calcium microdomains in aspiny dendrites. *Neuron* 40(4): 807-21.
- [14] **Aronov, D.**, Reich, D.S., Mechler, F., and Victor, J.D. (2003) Neural coding of spatial phase in V1 of the macaque monkey. *J Neurophysiol* 89(6): 3304-27.
- [15] Cossart, R., **Aronov, D.** and Yuste, R. (2003) Attractor dynamics of network UP states in the neocortex. *Nature* 423(6937): 283-8.
- [16] **Aronov, D.** (2003) Fast algorithm for the metric-space analysis of simultaneous responses of multiple single neurons. *J Neurosci Methods* 124(2): 175-9.
- [17] Mao, B.Q., Hamzei-Sichani, F., **Aronov, D.**, Froemke, R.C. and Yuste, R. (2001) Dynamics of spontaneous activity in neocortical slices. *Neuron* 32(5): 883-98.

## Book Chapter

Tashiro, A., Aaron, G., **Aronov, D.**, Cossart, R., Dumitriu, D., Fenstermaker, V., Goldberg, J., Hamzei-Sichani, F., Ikegaya, Y., Konur, S., MacLean, J., Nemet, B., Nikolenko, V., Portera, C. and Yuste, R. (2003) Imaging brain slices. Pawley's Handbook of Biological Microscopy.

## Fellowships and Awards

K99/R00 Pathway to Independence Award (NINDS)	2015 – present
Helen Hay Whitney Foundation Postdoctoral Fellowship (HHMI Fellow)	2012 – 2015
Hertz Foundation Graduate Fellowship (Silvio Micali Fellow)	2006 – 2010
Walle Nauta Award for Continuing Dedication to Teaching (MIT)	2008
Agnus MacDonald Award for Excellence in Undergraduate Teaching (MIT)	2006
Presidential Fellowship (MIT)	2005 – 2006
Magna Cum Laude (Columbia University)	2005
C. P. Davis Scholarship (Columbia University)	2001 – 2005
National Finalist, Intel Science Talent Search	2000

## Invited Talks

Society for Neuroscience (SfN), “Recent Surprises from Hippocampal Neurophysiology”	2017
Spring Hippocampal Research Conference	2017
Boston University, Charles River Association for Memory (CRAM)	2017
Massachusetts Institute of Technology, McGovern Institute Seminar	2017
Neural Basis of Active Sensation and Navigation Conference, Janelia Research Campus	2017
Hunter College, Psychology Department Seminar	2017
University of Pennsylvania, Computational Neuroscience Initiative Seminar	2016
Computational and Systems Neuroscience (COSYNE)	2016
Mediterranean Institute of Neurobiology, External Seminar	2015
SUNY Downstate Medical Center, Neural and Behavioral Science Seminar	2015
NYU Langone Medical Center, Special Seminar	2015
Bird Song Workshop	2007, 2010

## Teaching and Service

Lecturer, Developmental and Systems Neurobiology (Columbia University)	2017
Lecturer, Neuroethology (New York University)	2016
Reviewer, eLife, Journal of Neuroscience Methods, Nature Communications, Nature Neuroscience, Neural Computation, Neural Networks	