Chris Angeloni

chris.angeloni@gmail.com
Website

Education & Training

Postdoctoral Researcher	Neurobiology, Northwestern University *Advisor:* Dr. Daniel Dombeck	April 2022-present
Postdoctoral Researcher	Neuroscience, University of Pennsylvania *Advisor:* Dr. Maria N. Geffen	Jan 2022- March 2022
PhD	Psychology, University of Pennsylvania *Thesis:* Perceptual consequences and neural mechanisms of auditory adaptation. *Advisor:* Dr. Maria N. Geffen	December 2022
B.S.	Neuroscience, Lafayette College *Magna cum laude* - GPA: 3.9	May 2012
B.A.	Studio Art, Lafayette College *Magna cum laude* - GPA: 3.9	May 2012

Research Experience

OIST Computational Neuroscience Course — June 2018
Okinawa Institute of Science and Technology
Project: LIF circuit model of gain modulation.

KITP: Physics of Hearing Workshop — June 2017
Kavli Institute at UC Santa Barbara

Research Analyst — June 2012 - June 2014
Vanderbilt University
Advisor: Dr. Frank Tong

Neuroscience Honors Thesis/BCI Think-Tank — May 2011 - May 2012
Lafayette College
Advisors: Dr. Lisa Gabel & Dr. Yih-Chuong Yu

Publications

Lai, A.T.*, Espinosa, G.*, Wink, G.E.*, **Angeloni, C.F.***, Dombeck, D.A., MacIver, M.A. (2024). A robot-rodent interaction arena with adjustable spatial complexity for ethologically relevant behavioral studies. *Cell Reports* (in press). *co-first authors

Angeloni, C.F., Mlynarski, W., Williams, A.M., Wood, K.C., Garami, L., Hermundstad, A., Geffen, M.N. (2023). Dynamics of cortical contrast adaptation predict perception of signals in noise. *Nature Communications* 14, 4817.

Williams, A.M., **Angeloni, C.F.**, Geffen, M.N. (2023). Sound improves neuronal encoding of visual stimuli in mouse primary visual cortex. *Journal of Neuroscience* 43 (16) 2885-2906.

Lesicko, A.M.H., **Angeloni, C.**, Blackwell, J.M., Di Biasi, M., Geffen, M.N. (2022). Cortico-fugal regulation of predictive coding. *eLife* 11: e73289.

Wood, K. C., **Angeloni, C.**, Oxman, K., Clopath, C., & Geffen, M. N. (2022). Neuronal activity in sensory cortex predicts the specificity of learning. *Nature Communications* 13, 1167.

Betzel, R.F., Wood, K.C., **Angeloni, C.**, Geffen, M.N., Bassett, D.S. (2019). Stability of spontaneous, correlated activity in mouse auditory cortex. *PLOS Computational Biology* 15 (12), e1007360.

Angeloni C., Geffen M.N. (2018). Contextual modulation of sound in the auditory cortex. *Current Opinion in Neurobiology*, 49:8-15.

Lorenc, E.S., Pratte, M.S., **Angeloni, C.**, Tong, F. (2014). Expertise for upright faces improves the precision but not the capacity of visual working memory. *Attention, Perception, & Psychophysics*, 76(7):1975-84.

Angeloni, C., Salter, D., Corbit, V., Lorence, T., Yu, Y-C., & Gabel, L.A. (2012). P300-based brain-computer interface memory game to improve motivation and performance. *Proc. of Ann. NEBEC*, 38:35-36.

Professional Memberships

Society for Neuroscience	Jul 2013 - present
Vision Sciences Society	Feb 2013 - 2015

Honors & Awards

F31 DC016524 NRSA 2017 - 2021
Predoctoral Ruth L. Kirschstein National Research Service Award,
National Institute on Deafness and Other Communication Disorders,
"The function of cortical gain adaptation in detecting sounds in noise."

NSF GRFP Honorable Mention April 2016

NSF IGERT Traineeship in Complex Scene Perception Aug 2014 - 2016
Training fellowship for interdisciplinary, computational research.

Rappolt '67 and Oeschle '57 Neuroscience Prize April 2012
Awarded to an undergraduate senior based on scholarship in the classroom and laboratory and service to the major.

Federal SMART Grant 2010 - 2012
Federal grant awarded to high performing students in the natural sciences.

Lafayette Marquis Scholar 2008 - 2012
Academic scholarship awarded based on merit.

Lafayette Dean's List 2008 - 2012
Awarded for maintaining a cumulative GPA greater than 3.5.

Teaching Experience

Teaching assistant for CIS140: Introduction to Cognitive Science Fall 2015

Teaching assistant for PSYC149: Cognitive Neuroscience Spring 2016

Mentoring:
Stamati Lliapis – undergraduate student, University of Pennsylvania 2014 – 2017
Nitay Caspi – undergraduate student, University of Pennsylvania 2016

Public Engagement

Science After Hours: 'Don't Try This at Home', Franklin Institute 2017
Designed and presented demos of acoustical resonance.

Science After Hours: 'Nerd Olympics', Franklin Institute 2015
Helped run an auditory illusion booth to teach young adults audition.

Brain Blast 2013 – 2014
Vanderbilt Health program for teaching children about neuroscience.

TEDxLaf 2011 – 2012
Promoted and organized a TED-style talk series at Lafayette College to educate and inspire the public with science and art-related talks.

O+ Festival Participant 2011
Designed and installed original artwork for the O+ Festival, an event providing health care and awareness for artists.

Skills

Methods: chronic and acute electrophysiology, optogenetics, operant behavioral training, probabilistic modelling, machine learning, general linear models, two-photon imaging, fMRI, EEG, eye tracking

Programming: MATLAB, Bash, Arduino, Python, R, HTML/CSS, JavaScript, openGL

Software: Kilosort2, phy, Brian2 simulator, PrairieLink, Plexon, Unity, Blender, SPSS, MS Office, Adobe Suite, FSL, Freesurfer, BrainVoyager

References

Dr. Maria Geffen, Associate Professor
Department of Neuroscience
University of Pennsylvania
3400 Spruce St., 5 Ravdin
Philadelphia, PA 19104
(215) 898-0782
mgeffen@pennmedicine.upenn.edu

Dr. David Brainard, RRL Professor of Psychology
Department of Psychology
University of Pennsylvania
3710 Hamilton Walk, 417 Goddard Labs
Philadelphia, PA 19104
(215) 573-7579
brainard@psych.upenn.edu

Dr. Yale Cohen, Professor
Department of Otorhinolaryngology
University of Pennsylvania School of Medicine
3400 Spruce, 5 Ravdin
Philadelphia, PA 19104
(215) 898-7504
ycohen@pennmedicine.upenn.edu