

Andrew J. Peters

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Education

2010 – 2016 **Ph.D. Neuroscience**, University of California, San Diego
 2006 – 2009 **B.S. Neuroscience & Behavioral Biology**, Emory University
 2005 – 2006 **Coursework for B.S.**, Rochester Institute of Technology

Research

2016 – Present **Postdoctoral fellow**, University College London, Carandini & Harris Lab
 2010 – 2016 **Ph.D. student**, University of California, San Diego, Komiyama Lab
 2009 – 2010 **Postbaccalaureate IRTA Fellow**, NIMH/NIH, Leopold Lab
 2008 – 2009 **Undergraduate researcher**, Emory University, Rainnie Lab
 Summer 2008 **Summer intern**, Harvard University, Carey Lab
 2006 – 2007 **Student Researcher**, Emory University, Sathian Lab

Publications

Peters AJ, Marica A-M, Fabre JM, Harris KD, Carandini M
 Visuomotor learning promotes visually evoked activity in the medial prefrontal cortex
bioRxiv preprint (2022) doi.org/10.1101/2022.05.31.494126

Peters AJ, Fabre JM, Steinmetz NA, Harris KD, Carandini M
 Striatal activity topographically reflects cortical activity
Nature (2021) doi.org/10.1038/s41586-020-03166-8

Jacobs EAK, Steinmetz NA, **Peters AJ**, Carandini M, Harris KD
 Cortical state fluctuations during sensory decision making.
Current Biology (2020) doi.org/10.1016/j.cub.2020.09.067

Steinmetz NA, [and 33 others including **Peters AJ**]
 Aberrant Cortical Activity in Multiple GCaMP6-Expressing Transgenic Mouse Lines.
eNeuro (2017) doi.org/10.1523/ENEURO.0207-17.2017

Peters AJ, Lee J, Hedrick NG, O'Neil K, Komiyama T
 Reorganization of corticospinal output during motor learning.
Nature Neuroscience (2017) doi.org/10.1038/nn.4596

Chen SX, Kim AN, **Peters AJ**, Komiyama T
 Subtype-specific plasticity of inhibitory circuits in motor cortex during motor learning
Nature Neuroscience (2015) doi.org/10.1038/nn.4049

Peters AJ, Chen SX, Komiyama T
 Emergence of reproducible spatiotemporal activity during motor learning
Nature (2014) doi.org/10.1038/nature13235

Schmid MC, Schmiedt JT, **Peters AJ**, Saunders RC, Maier A, Leopold DA

Motion-sensitive responses in visual area V4 in the absence of primary visual cortex
Journal of Neuroscience (2013) doi.org/10.1523/JNEUROSCI.3923-13.2013

Kato HK, Gillet SN, **Peters AJ**, Isaacson JS, Komiyama T
Parvalbumin-expressing interneurons linearly control olfactory bulb output
Neuron (2013) doi.org/10.1016/j.neuron.2013.08.036

Cox MA, Schmid MC, **Peters AJ**, Saunders RC, Leopold DA, Maier A
Receptive field focus of visual area V4 neurons determines responses to illusory surfaces
PNAS (2013) doi.org/10.1073/pnas.1310806110

Schmid MC, Mrowka SW, Turchi J, Saunders RC, Wilke M, **Peters AJ**, Ye FQ, Leopold DA
Blindsight depends on the lateral geniculate nucleus
Nature (2010) doi.org/10.1038/nature09179

Lacey S, **Peters A**, Sathian K
Cross-modal object recognition is viewpoint-independent
PLoS ONE (2007) doi.org/10.1371/journal.pone.0000890

Reviews

Peters AJ, Liu H, Komiyama T
Learning in the rodent motor cortex.
Annual Review of Neuroscience (2017) doi.org/10.1146/annurev-neuro-072116-031407

Grants

2022 – 2027	Sir Henry Dale Fellowship
2017 – 2019	HFSP Long-Term Postdoctoral Fellowship
2016 – 2018	EMBO Long-Term Postdoctoral Fellowship
2016	Newton International Postdoctoral Fellowship
2013 – 2015	Neuroplasticity of Aging Training Grant

Awards

2022	FENS Travel Grant
2021	UCL Institute of Ophthalmology Research Excellence Award
2015	Leon Thal Award for Excellence in Graduate Research (UCSD)
2015	Best oral presentation, Kyoto University 13 th International Student Seminar
2014	Achievement Rewards for College Scientists (ARCS) scholarship
2013	Travel award to RIKEN BSI summer course, Wako, Japan
2009	Excellence in Undergraduate Educational Support Award (Emory University)

Talks

2022	University of Bristol
2022	Stony Brook University
2021	Swedish Basal Ganglia Society Conference
2021	University of Pittsburgh
2021	Churchland Lab, University of California, Los Angeles

2021	Uchida Lab, Harvard University
2021	University of Oxford
2020	Large-scale neuronal recordings: advances and challenges, Karolinska Institute
2018	EMBO Fellows' Meeting, Heidelberg, Germany.
2015	UCSD Neurosciences Graduate Program retreat
2015	Kyoto University 13 th International Student Seminar
2014	Princeton University

Mentoring

2021 – present	Andrada-Maria Marica, Master's student at UCL
2019 – present	Julie Fabre, Ph.D. student at UCL

2018	Student, EMBO Laboratory Leadership Course for Postdocs Three-day course on best practices in leading a scientific team
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Teaching

2017 – 2021	UCL Neuropixels Course teacher Gave lectures and led small groups in learning to perform Neuropixels experiments
2011	Teaching Assistant, Graduate Cellular and Molecular Neuroscience Led weekly review sessions
2010 – 2016	Neuroscience Outreach Present interactive neuroscience lecture and modules at high schools in the San Diego area
2007 – 2009	Supplemental Instruction Leader Tutored organic chemistry at Emory University in weekly group sessions and individually
2006 – 2009	Volunteer Tutor at Avondale High School Tutored high school students in science and math for help with classes and preparing for the science portion of the Georgia High School Graduation Test

Service

Ongoing	Ad hoc reviewer eLife, Science Advances, Cell Reports
2010 – 2014	UCSD curriculum committee Represented students in developing graduate course curriculum

Posters

Peters AJ, Marica A-M, Fabre JM, Harris KD, Carandini M (2022). Visuomotor learning routes visual signals to medial prefrontal cortex. FENS Forum 2022, Paris, France.

Peters AJ, Steinmetz NA, Harris KD, Carandini M (2019). Dorsocentral striatum integrates sensory and motor signals during visually guided behavior. Cosyne 2019, Lisbon, Portugal.

Peters AJ, Steinmetz NA, Harris KD, Carandini M (2018). Relationship between cortical and striatal activity during visually guided behavior. Society for Neuroscience, San Diego, California.

Peters AJ, Steinmetz NA, Harris KD, Carandini M (2017). Interactions between population activity in cortex and striatum. Society for Neuroscience, Washington D.C.

Peters AJ, Lee J, Komiyama T (2015). Corticospinal population activity during motor learning. Society for Neuroscience 2015, Chicago, Illinois.

Peters AJ, Chen SX, Komiyama T (2013). Motor cortex ensemble dynamics imaged during motor learning. Society for Neuroscience, San Diego, California.

Peters AJ, Komiyama T (2013). Motor cortex ensemble dynamics imaged during motor learning. RIKEN Brain Science Institute Summer Program, Wako, Japan.

Kato HK, Gillet SN, **Peters AJ**, Isaacson JS, Komiyama T (2013). Broadly-tuned parvalbumin-expressing interneurons control the gain of olfactory bulb output. Society for Neuroscience, San Diego, California.

Boyd AM, **Peters AJ**, Komiyama T, Isaacson JS (2013). *In vivo* imaging of the activity of cortical feedback projections in the mouse olfactory bulb. Society for Neuroscience, San Diego, California.

Natera O, Alfonso S, Sprague T, **Peters A**, Tsunemoto R, Lau M, Kaestner E, Goetz AE, Leinwand S, Kiggins, J (2013). Bringing Neuroscience to K-12 students in the higher San Diego area. Society for Neuroscience, San Diego, California.

Schmid MC, Schmiedt JT, Meyer A, **Peters A**, Saunders R, Maier A, Leopold DA (2013). V1-independent signal processing by V4 neurons. Society for Neuroscience, San Diego, California.

Schmiedt T, **Peters AJ**, Saunders RC, Maier A, Leopold DA, Schmid MC (2013). Blindsight: insights from neuronal responses in macaque V4 after V1 injury. 36th European Conference on Visual Perception, Bremen, Germany.

Schmid MC, **Peters AJ**, Schmiedt J, Saunders RC, Maier A, Leopold DA (2012). Organization of neural responses in macaque area V4 without input from V1. Society for Neuroscience, New Orleans, Louisiana.

Cox MA, Schmid MC, **Peters AJ**, Saunders RC, Leopold DA, Maier A (2011). Neuronal representation of subjective shapes in primate area V4. Annual Meeting of the Vision Sciences Society 2012, Naples, Florida

Cox MA, Schmid MC, **Peters AJ**, Saunders RC, Leopold DA, Maier A (2011). Single Neuron and LFP Responses to Subjective Shapes in Area V4. Neuroscience 2011, Washington D.C.

Mrowka S, **Peters A**, Merkle H, Zhu C, Gothard KM, Leopold DA, Schmid MC (2009). V1-independent fMRI activation patterns in the macaque temporal lobe. Society for Neuroscience, Chicago, Illinois.

Madsen TE, Smart OL, **Peters AJ**, Guillory LC, Mayberg HS, Rainnie DG (2009). Deep brain stimulation targeting the rat infralimbic cortex modulates locomotor activity and local field potential oscillations in the basolateral amygdala. Amygdala in Health and Disease: Contributions to Emotional Memories, Waterville, Maine.

Lacey S, **Peters A**, Sathian K (2007). Visuo-haptic object representation is viewpoint-independent. 8th International Multisensory Research Forum, Sydney, Australia.