

Francisco J. Luongo

CONTACT INFORMATION	1200 E. California blvd. (MC 216-76) Pasadena, CA 91125	415-707-9095 fluongo@caltech.edu
EDUCATION	University of California, San Francisco , San Francisco, CA Ph.D., Neuroscience, December 2015 <ul style="list-style-type: none">• Thesis Topic: <i>Information processing and computation in prefrontal microcircuits</i>• Thesis Advisor: Vikaas S. Sohal, M.D., Ph.D Stanford University , Palo Alto, CA B.S., Biology, May 2008	
CURRENT POSITION	Postdoctoral Fellow California Institute of Technology Supervisor: Doris Y. Tsao, Ph.D	January 2016 to present
RESEARCH INTERESTS	neural computation, cortical microcircuits, neural networks, network analysis, calcium imaging, ECoG time-series analysis, scientific computing	
PAST RESEARCH EXPERIENCE	Doctoral Student University of California San Francisco Supervisor: Vikaas S. Sohal, M.D., Ph.D Research Assistant Stanford University Supervisor: Thomas Clandinin, Ph.D Undergraduate Researcher Stanford University Supervisor: Liqun Luo, Ph.D	June 2011 to December 2015 July 2008 to Aug 2010 Dec 2006 to June 2008
PUBLICATIONS	<ol style="list-style-type: none">1. Luongo, F., Zimmerman, C., Horn, M., and Sohal, V.S. "Correlations between prefrontal neurons form a small world network that optimizes the generation of multineuron sequences of activity." <i>Journal of Neurophysiology</i>, May 1;115(5):2359-75. 2016 link2. Luongo, F., Horn, M., and Sohal, V.S. "Putative microcircuit-level substrates for attention are disrupted in mouse models of autism." <i>Biological Psychiatry</i>, Apr 15;79(8):667-75. 2016 link3. Gee, S., Ellwood, I., Patel, T., Luongo, F., Deisseroth, K., and Sohal, V.S. "Synaptic activity unmasks dopamine D2 receptor modulation of a specific class of layer V pyramidal neurons in prefrontal cortex." <i>Journal of Neuroscience</i>, 4;32(14):4959-4971, 2012. link4. Gohl D.M., Silies M.A., Gao X.J., Bhalerao S., Luongo F.J., Potter C.J., and Clandinin T.R. "A versatile in-vivo system for directed genetic dissection of gene expression patterns." <i>Nature Methods</i>, 8(3):231-237, 2011. link	
INVITED TALKS	<ol style="list-style-type: none">1. Luongo F., 'Identifying Object Representations in the Rodent Visual System.' <i>Chen Institute Workshop on Computational Approaches to Neuroscience</i>, [Pasadena, CA], 2017. link	

CONFERENCE
ABSTRACTS

1. **Luongo, F.**, Liu, L., and Tsao, D. "Figure ground modulation in the mouse visual system" *Society for Neuroscience (SFN)*, [Washington D.C., USA], 2017 [link](#)
2. **Luongo, F.**, Liu, L., and Tsao, D. "Extra-classical receptive field effects on visual processing in the awake rodent" *Society for Neuroscience (SFN)*, [San Diego, USA], 2016 [link](#)
3. Kirkby, L., **Luongo, F.**, Nahum, M., Van Vleet, T., Lee, M., Dawes, H., Chang, E., and Sohal, V. "Intrinsic network for mood in the human " *Society for Neuroscience (SFN)*, [San Diego, USA], 2016 [link](#)
4. Kirkby, L., **Luongo, F.**, Nahum, M., Van Vleet, T., Lee, M., Dawes, H., Chang, E., and Sohal, V. "Neural biomarkers of mood in the human mesolimbic network" *Society for Neuroscience (SFN)*, [Chicago, USA], 2015 [link](#)
5. **Luongo, F.**, Horn, M., and Sohal, V.S. "Changes in prefrontal microcircuit organization increase repetitive network activity in two mouse models of autism" *AREADNE: Research in encoding and decoding of neural ensembles*, [Santorini, Greece], 2014. [link](#)
6. Otero L., **Luongo F.**, Gonzalez E., Ganoza C., Hinostroza G., Seas C., and Gotuzzo E. "High rate of TB among household contacts of multidrug-resistant tuberculosis (MDR-TB) index cases in a high incidence district of Lima, Peru." *Centenary Meeting of the Royal Society of Tropical Medicine and Hygiene* [London, UK], 2007
7. **Luongo F.**, Cui B., and Han K. "High Strength/ High Conductivity copper by pulsed electrodeposition." *International Symposium of Crystalline Organic Materials*. [Key West, FL], 2005

PAPERS IN
PREPARATION

1. **Luongo, F.**, Kirkby, L., Lee, M., Dawes, H., Chang, E.C., Sohal, V.S. "Key interactions efficiently summarize distributed network activity within chronic, large-scale recordings in the human brain."

AWARDS

Arnold O. Beckman Postdoctoral Fellowship (Accepted)	2017-2019
Della Martin Postdoctoral Fellowship (Awarded)	2017
National Institute of General Medicine IMSD predoctoral fellow	2010-2013
National Hispanic Scholar	2004
National Merit Scholar	2004

REFERENCES

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Biology and Biological Engineering	E-mail: doristsao@caltech.edu
California Institute of Technology	
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TECHNIQUES AND Techniques:

SOFTWARE SKILLS 2-photon calcium imaging, electrophysiology, Optogenetics, calcium imaging, micro-endoscope imaging, histology, cloning, drosophila genetics

Computer Programming:

python, MATLAB, bash, unix, git