

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 June 2011 to December 2015 University of California San Francisco Supervisor: Vikaas S. Sohal, M.D., Ph.D Research Assistant July 2008 to Aug 2010 Stanford University Supervisor: Thomas Clandinin, Ph.D Undergraduate Researcher Dec 2006 to June 2008 Stanford University Supervisor: Liqun Luo, Ph.D	
PUBLICATIONS AND ABSTRACTS	<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, In Press</i> 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. Luongo, F., Horn, M., and Sohal, V.S. "Changes in prefrontal microcircuit organization increase repetitive network activity in two mouse models of autism" <i>AREADNE: Research in encoding and decoding of neural ensembles</i>, [Santorini, Greece], 2014. link4. 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. link5. 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	

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."
2. Ellwood, I., **Luongo, F.**, and Sohal, V.S. "Changes in criticality associated with the modulation of prefrontal microcircuits by dopamine."

AWARDS

National Institute of General Medicine IMSD predoctoral fellow	2010
National Hispanic Scholar	2004
National Merit Scholar	2004

REFERENCES

Vikaas S. Sohal	
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University of California, San Francisco	
Michael P. Stryker	
W.F. Ganong Professor of Physiology	Phone: (415) 502-7380
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University of California, San Francisco	

TECHNIQUES AND

SOFTWARE SKILLS Techniques:
 Optogenetics, calcium imaging, single-cell electrophysiology, micro-endoscope imaging, histology, cloning, drosophila genetics

Computer Programming:
 python, MATLAB, bash, unix, Git