

## SHUSHRUTH

Associate Research Scientist,  
Shadlen Lab, Dept. of Neuroscience  
Columbia University, New York NY  
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### Education

#### Ph.D. in Neuroscience (2005 - 2011)

**Thesis: The contribution of extra-striate feedback to contextual computations in the primate primary visual cortex.**

**University of Utah, Salt Lake City, UT, USA 84112.**

Advisor: Dr. Alessandra Angelucci, M.D., Ph.D.

#### M.B.B.S. (1997 - 2003)

**Bangalore Medical College, Bangalore, India 560002.**

Graduated First Class

### Research Experience

- Post-doctoral Research Associate, Shadlen Lab, Howard Hughes Medical Institute, Columbia University, New York NY. Dec 2012-  
Present
- Post-doctoral Research Associate, Shadlen Lab, Howard Hughes Medical Institute, University of Washington, Seattle WA. May 2011-  
Nov 2012
- Graduate Assistant, Moran Eye Center, University of Utah, Salt Lake City UT. Aug 2005-  
May 2011
- Fellow, Department of Neurophysiology, National Institute of Mental Health and Neurosciences, Bangalore, India. Apr 2004-  
Jun 2005
- Research assistant, Dept. of Molecular Biology, Bangalore University. Bangalore, India. Jul 2003-  
Feb 2004

### Publications

#### Peer-reviewed publications (\* co-primary author)

- **Shushruth S\***, Mazurek M\*, Shadlen MN. Comparison of decision-related signals in sensory and motor preparatory responses of neurons in Area LIP. *Journal of Neuroscience* 2018 (*in press*)
- Seyedhosseini M\*, **Shushruth S\***, Davis T, Ichida JM, House PA, Greger B, Angelucci A, Tasdizen T. Informative features of local field potential signals in primary visual cortex during natural image stimulation. *Journal of Neurophysiology* 2015 Mar 1;113(5):1520-32.
- **Shushruth S\***, Nurminen L\*, Bijanzadeh M, Ichida JM, Vanni S, Angelucci A. Different orientation-tuning of near and far surround suppression in Macaque primary visual cortex mirrors their tuning in human perception. *Journal of Neuroscience*. 2013 Jan; 33(1):106-19.
- **Shushruth S**, Mangapathy P, Ichida JM, Bressloff PC, Schwabe L, Angelucci A. Strong recurrent networks compute the orientation tuning of surround modulation in the primate primary visual cortex. *Journal of Neuroscience*. 2012 Jan; 32(1):308-21
- Schwabe L, Ichida JM, **Shushruth S**, Mangapathy P, Angelucci A. Contrast-dependence of surround suppression in Macaque V1: Experimental testing of a recurrent network model. *Neuroimage*. 2010 Sep; 52(3):777-92.
- **Shushruth S\***, Ichida JM\*, Levitt JB, Angelucci A. Comparison of spatial summation properties of neurons in macaque V1 and V2. *Journal of Neurophysiology*. 2009 Oct; 102(4):2069-83.

## Reviews and Book Chapters

- Angelucci A, **Shushruth S**. Beyond the classical receptive field: Surround modulation in primary visual cortex. In: *The New Visual Neurosciences*. (Chalupa LM, Werner JS, eds), 2013. Cambridge: MIT press.
- **Shushruth S**. Exploring the neural basis of consciousness through anesthesia. *Journal of Neuroscience*. 2013 Jan; 33(5):1757-8

## Conference Abstracts (Presenting author only)

- **Shushruth S**, Shadlen MN (2016). A diffusion process underlies action selection in an abstract decision-making task. *Soc. Neurosci. Abstr. Online*: 717.28
- **Shushruth S**, Shadlen MN (2016). A diffusion process underlies action selection when contingent on an abstract decision. *Gordon Research Conference on the Neurobiology of Cognition*
- **Shushruth S**, Shadlen MN (2016). Postponement of evidence accumulation in area LIP until action-selection is possible. *Computational and Systems Neurosci Abstr Online*
- **Shushruth S**, Mazurek M, Shadlen MN (2013). A comparison of categorization signals and decision related signals in Area LIP. *Soc. Neurosci. Abstr. Online*: 668.07
- **Shushruth S**, Davis TS, Tasdizen T, Ichida JM, House P, Greger B, Angelucci A (2011). LFP signals evoked by natural image stimulation of the far-surround of V1 neurons carry contrast-independent, image-specific information. *Soc. Neurosci. Abstr. Online*: 483.11
- **Shushruth S**, Tasdizen T, Ichida JM, Angelucci A (2011). Surround signals in V1 evoked by natural images carry image specific information. *Grand Challenges in Neural Computation, Santa Fe*
- **Shushruth S**, Ichida JM, Levitt JB, Angelucci A (2009). Comparison of spatial summation properties in macaque V1 and V2. *Soc. Neurosci. Abstr. Online*: 453.15
- **Shushruth S**, Ichida JM, Angelucci A (2008). Orientation tuning of facilitatory and suppressive signals from the far-surround of primary visual cortex neurons. *Computational and Systems Neurosci Abstr Online*
- **Shushruth S**, Ichida JM, Angelucci A (2007). Far-surround facilitation of sub-optimally oriented stimuli in the classical receptive field. *Soc. Neurosci. Abstr. Online*: 279.4

## Awards and Grants

- Taub Institute Alzheimer Disease Research Pilot Grant (2018 - 2019)
- 2015 NARSAD Young Investigator Grant. (2016 - 2018)
- Utah Brain Institute training grant for the Marine Biological Laboratory course: Methods in Computational Neuroscience (2010).
- University of Utah training grant for the Cold Spring Harbor Laboratories course: Structure and Development of the Visual System (2006).

## Invited reviewer (ad hoc)

Neuron, Journal of Neuroscience, Cerebral Cortex, Journal of Neurophysiology, Journal of Vision, Vision Research, Frontiers in Neuroscience, PLoS, eNeuro, CoSyNe.