

Srinivas Gorur-Shandilya
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Education

Ph.D. 2017 Yale University, USA. Thesis advisor: Thierry Emonet.
M.Sc. 2010 University of Göttingen, Germany.
B.Sc. 2008 St. Stephen's College, University of Delhi, India.

Research Experience

August 2017 - present Post-doctoral associate with Eve Marder at the Volen National Center for Complex Systems, Brandeis University.

Jan. 2011 - Jul. 2017 Ph.D. research, Yale University. I worked with Prof. Thierry Emonet, and discovered novel features of adaptation and gain control in *Drosophila* olfactory sensory neurons.

Sep. 2009 - August 2010 Research Assistant, Max Planck Institute for Nonlinear Dynamics and Self-Organisation, Göttingen, Germany. Working with Dr. Marc Timme, I developed a method for reconstructing networks from observations of their dynamics.

Professional Activities and Awards

ad-hoc reviewer, *New Journal of Physics* and *Scientific Reports*

- * Presenters' Travel Grant, Cosyne, USA (2016)
- * Conference Travel Fellowship, Graduate Student Assembly, Yale University, USA (2015)
- * Anne S. And William H. Macmillan Fellowship, Yale University, USA (2011-2013)
- * Research Fellowship, Max Planck Society, Germany (2009-2010)
- * Fellowship from the Excellence Foundation for the Promotion of the Max Planck Society, Max Planck Society, Germany (2008-2009)
- * KVPY Fellowship, The Department of Science and Technology, India (2005-2008)

Publications

1. P Bronk, EA Kuklin, **S Gorur-Shandilya**, C Liu, TD Wiggin, ML Reed, E Marder, LC Griffith. (2018) "Regulation of Eag by calcium/calmodulin controls presynaptic excitability in *Drosophila*" *Journal of Neurophysiology* 10.1152
2. **S Gorur-Shandilya**¹, M Demir¹, J Long, DA Clark and T Emonet (2017) "Olfactory receptor neurons use gain control and complementary kinetics to encode intermittent odorant stimuli" *eLife* 6 (1 = equal contribution)

3. D Raccuglia, LY McCurdy, M Demir, **S Gorur-Shandilya**, M Kunst, T Emonet, and M Nitabach. (2016) “Temporal contrast enhancement in the *Drosophila* olfactory system regulates behavioral responses to plume-like stimuli” *eNeuro* 3(4)
4. T-W Koh, Z He, **S Gorur-Shandilya**, K Menuz, NK Larter, S Stewart and JR Carlson. (2014) “The *Drosophila* IR20a Clade of Ionotropic Receptors Are Candidate Taste and Pheromone Receptors” *Neuron* 83(4)
5. **S Gorur-Shandilya** and M Timme. (2011) “Inferring Network Topology from Complex Dynamics” *The New Journal of Physics* 13(1)

Public Talks

“Sequential gain control in *Drosophila* olfactory receptor neurons.” Accepted talk at Sense2Synapse, New York, USA. (2016)

“Topology Predicts Dynamics; Dynamics Constrain Topology.” Invited talk at SIAM Conference on Applications of Dynamical Systems (DS15), Snowbird, USA. (2015)

“Why is anything the way it is?” Accepted lightning talk at the 30th Chaos Communication Congress (30C3), Hamburg, Germany. (2013)

Teaching

Teaching Fellow for Dynamical Systems in Biology (MCDB 361) at Yale University, taught by Profs. Thierry Emonet, Damon Clark and Jonathan Howard (2014)

Teaching Fellow for Neurobiology (MCDB 320a) at Yale University, taught by Profs. Haig Keshishian and Paul Forscher. (2010)

Projects & Code

xolotl, a fast, flexible and interactive neuron and network simulator written in C++. Free software, available at <https://github.com/sg-s/xolotl>

kontroller, a MATLAB toolbox for data acquisition and control of experiments. Free software, available at <https://github.com/sg-s/kontroller>

crabsort, a general-purpose multi-channel extracellular spike sorter with machine learning. Free software, available at <https://github.com/sg-s/crabsort>

Other projects and code available at <https://github.com/sg-s/>