



Fidel Santamaria, Ph.D.

Assistant Professor

Department of Biology

Areas of Teaching Interest:

- Computational Neuroscience
- Biology

Areas of Research Interest:

- At present, our work is specifically focused on understanding how dendritic structure controls the reliability and specificity of the biochemical signals that underlie synaptic activity and plasticity.
- Dendritic structure & computation

Publications

- Cholesterol Homeostasis Markers are Localized to Mouse Hippocampal Pyramidal and Granule Layers
G. Perry, C. Phelix, F. Santamaria, M. Smith and C. Valdez, Online publication in Wiley InterScience (www.interscience.wiley.com), Doi: 10.1002/hipo.20743.
- Dendritic Excitability Modulates Dendritic Information Processing in a Purkinje Cell Mode. *Frontiers in Computational Neuroscience*
A. Coop, H. Cornelius and F. Santamaria, published March 30, 2010, doi: 10.3389/fncom.2010.00006
- Quantifying the Effects of Elastic Collisions and Non-Covalent Binding on Glutamate Receptor Trafficking in the Post-Synaptic Density
G.J. Augustine, J. Gonzalez, S. Raghavachari and F. Santamaria, 2010, *PLoS Comput Biol* 6(5): e1000780.
Doi:10.1371/journal.pcbi.1000780