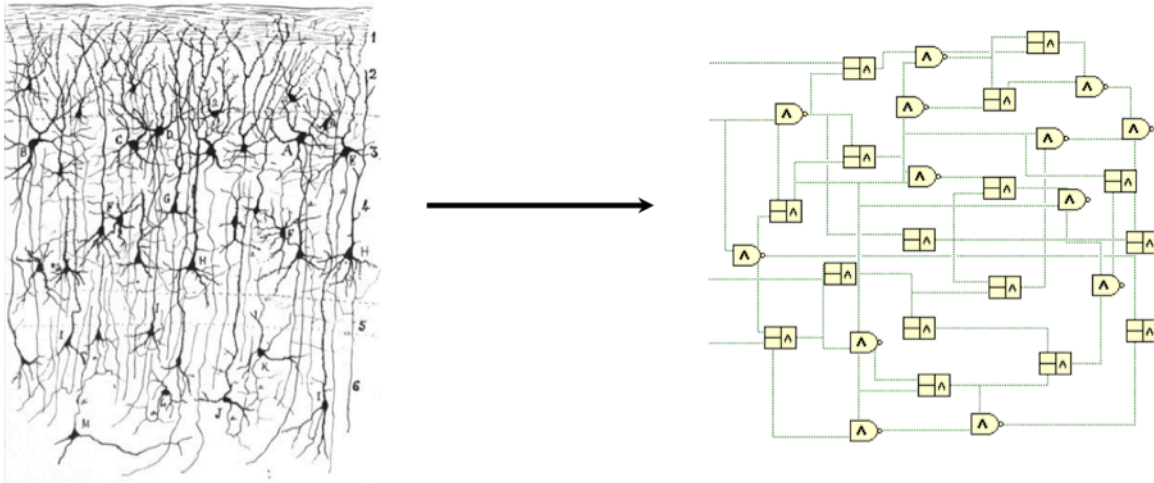


Reverse Engineering of Neocortical Circuits

Postdoctoral Fellowships Available

Yuste Lab, HHMI, Dept. Biological Sciences, Columbia University



Description:

Seeking highly motivated applicants to undertake *in-vitro* and *in-vivo* studies of cortical circuits from mouse neocortex. Our goal is to decipher the computational transfer function of putative circuit modules, by using a variety of optical and electrophysiological methods. Our group is a relatively small team of interdisciplinary researchers that work collaboratively and that have pioneered and developed two-photon imaging techniques, ranging from calcium imaging of action potentials in neuronal populations to activation or inactivation of neurons using novel caged compounds and spatial light modulators. We are moving to new laboratory space, in the Interdisciplinary Science Building (see below) on the main campus of Columbia University, and this will enable our group to expand, with experimental setups for additional researchers.

We are looking for applicants that are passionate about understanding cortical circuits and are particularly interested in optical methods. Postdocs will be expected to undertake highly interdisciplinary experimental research including performing surgical preparations and brain slices, acquiring *in-vitro* and *in-vivo* data and carrying out analysis on the resulting image data sets using Matlab or related software. Training is available for these skills.

Qualifications:

Candidates should have relevant experience and hold a doctoral degree in a related field (Neuroscience, Physics, Chemistry, Biomedical / Electrical Engineering or other Biological or Physical Sciences) or a medical degree. Expertise in electrophysiology, in-vivo imaging, optics and image analysis and previous work in cortex would be advantageous but not necessary. Excellent organizational, communication and team skills are important. The appointment will be for a three-year period, with the possibility of extension. Women, international scholars and minorities are encouraged to apply. Salary range will be competitive with HHMI postdoctoral salaries in the New York area. Subsidized housing in the Morningside neighbourhood of Columbia University will be provided.

How to Apply:

Interested applicants should send a resume and cover letter to Rafael Yuste rmy5@columbia.edu. More information about our lab is available at <http://www.columbia.edu/cu/biology/faculty/yuste/index.html>

