

Stanford



James Marshel

Rsch and Dev Scientist Engr 2, SoM - CNC - Cracking the Neural Code

Bio

HONORS AND AWARDS

- Young Investigator Award, NARSAD, Brain & Behavior Research Foundation (2021-2023)
- Postdoctoral Fellowship, Life Sciences Research Foundation, Simons Foundation sponsor (2013-2016)
- Dean's Postdoctoral Fellowship, Stanford University, School of Medicine (2013)
- Innovative Research Grant, Kavli Institute for Brain and Mind (2007-2009)
- Predoctoral Fellowship, Institute for Neural Computations, University of California San Diego, NIH (2007-2009)
- Predoctoral Fellowship, National Science Foundation, Bridge to the Doctorate (2005-2007)
- Warner Brown Memorial Prize for Outstanding Promise in Research, University of California Berkeley (2005)
- Highest Department Honors, University of California Berkeley (2005)
- Predoctoral Fellowship, Alliance for Graduate Education and the Professoriate (2005)

EDUCATION AND CERTIFICATIONS

- Ph.D., University of California San Diego, Neuroscience (2011)
- Postdoctoral, The Salk Institute for Biological Studies, Systems Neurobiology (2012)

Publications

PUBLICATIONS

- **Interacting neural ensembles in orbitofrontal cortex for social and feeding behaviour** *NATURE*
Jennings, J. H., Kim, C. K., Marshel, J. H., Raffiee, M., Ye, L., Quirin, S., Pak, S., Ramakrishnan, C., Deisseroth, K.
2019; 565 (7741): 645+
- **Cortical layer-specific critical dynamics triggering perception.** *Science (New York, N.Y.)*
Marshel, J. H., Kim, Y. S., Machado, T. A., Quirin, S., Benson, B., Kadmon, J., Raja, C., Chibukhchyan, A., Ramakrishnan, C., Inoue, M., Shane, J. C., McKnight, D. J., Yoshizawa, et al
2019
- **Feasibility Analysis of Genetically-Encoded Calcium Indicators as a Neural Signal Source for All-Optical Brain-Machine Interfaces**
Sun, X., Kao, J. C., Marshel, J. H., Ryu, S. I., Shenoy, K. V., IEEE
IEEE.2017: 174-80
- **Extended field-of-view and increased-signal 3D holographic illumination with time-division multiplexing** *OPTICS EXPRESS*
Yang, S. J., Allen, W. E., Kauvar, I., Andalman, A. S., Young, N. P., Kim, C. K., Marshel, J. H., Wetzstein, G., Deisseroth, K.
2015; 23 (25): 32573-32581

- **Projections from neocortex mediate top-down control of memory retrieval.** *Nature*
Rajasethupathy, P., Sankaran, S., Marshal, J. H., Kim, C. K., Ferenczi, E., Lee, S. Y., Berndt, A., Ramakrishnan, C., Jaffe, A., Lo, M., Liston, C., Deisseroth, K.
2015; 526 (7575): 653-659
- **Closed-Loop and Activity-Guided Optogenetic Control** *NEURON*
Grosenick, L., Marshal, J. H., Deisseroth, K.
2015; 86 (1): 106-139
- **Topography and Areal Organization of Mouse Visual Cortex** *JOURNAL OF NEUROSCIENCE*
Garrett, M. E., Nauhaus, I., Marshal, J. H., Callaway, E. M.
2014; 34 (37): 12587-12600
- **Genetically encoded voltage sensor goes live.** *Nature biotechnology*
Marshal, J. H., Deisseroth, K.
2013; 31 (11): 994-995
- **Diverging neural pathways assemble a behavioural state from separable features in anxiety** *NATURE*
Kim, S., Adhikari, A., Lee, S. Y., Marshal, J. H., Kim, C. K., Mallory, C. S., Lo, M., Pak, S., Mattis, J., Lim, B. K., Malenka, R. C., Warden, M. R., Neve, et al
2013; 496 (7444): 219-223
- **Anterior-Posterior Direction Opponency in the Superficial Mouse Lateral Geniculate Nucleus** *NEURON*
Marshal, J. H., Kaye, A. P., Nauhaus, I., Callaway, E. M.
2012; 76 (4): 713-720
- **Functional Specialization of Seven Mouse Visual Cortical Areas** *NEURON*
Marshal, J. H., Garrett, M. E., Nauhaus, I., Callaway, E. M.
2011; 72 (6): 1040-1054
- **New Rabies Virus Variants for Monitoring and Manipulating Activity and Gene Expression in Defined Neural Circuits** *NEURON*
Osakada, F., Mori, T., Cetin, A. H., Marshal, J. H., Virgen, B., Callaway, E. M.
2011; 71 (4): 617-631
- **Targeting Single Neuronal Networks for Gene Expression and Cell Labeling In Vivo** *NEURON*
Marshal, J. H., Mori, T., Nielsen, K. J., Callaway, E. M.
2010; 67 (4): 562-574