



Oscar Ruben Hernandez Cubero

Instructor, Neurosurgery

Bio

ACADEMIC APPOINTMENTS

- Instructor, Neurosurgery

PROFESSIONAL EDUCATION

- PhD, Université Paris Descartes - Université Sorbonne Paris Cité , Physics (2016)
- Master of Biomedical Engineering, Télécom ParisTech , Bioimaging (2012)
- Telecommunications Engineering, Universidad de Cantabria , Radio Communications (2011)

Publications

PUBLICATIONS

- **A neural circuit state change underlying skilled movements.** *Cell*
Wagner, M. J., Savall, J., Hernandez, O., Mel, G., Inan, H., Romyantsev, O., Lecoq, J., Kim, T. H., Li, J. Z., Ramakrishnan, C., Deisseroth, K., Luo, L., Ganguli, et al
2021
- **Fundamental bounds on the fidelity of sensory cortical coding.** *Nature*
Romyantsev, O. I., Lecoq, J. A., Hernandez, O., Zhang, Y., Savall, J., Chrapkiewicz, R., Li, J., Zeng, H., Ganguli, S., Schnitzer, M. J.
2020; 580 (7801): 100-105
- **Kilohertz two-photon brain imaging in awake mice.** *Nature methods*
Zhang, T. n., Hernandez, O. n., Chrapkiewicz, R. n., Shai, A. n., Wagner, M. J., Zhang, Y. n., Wu, C. H., Li, J. Z., Inoue, M. n., Gong, Y. n., Ahanonu, B. n., Zeng, H. n., Bito, et al
2019
- **Optogenetic stimulation of complex spatio-temporal activity patterns by acousto-optic light steering probes cerebellar granular layer integrative properties** *SCIENTIFIC REPORTS*
Hernandez, O., Pietrajtis, K., Mathieu, B., Dieudonne, S.
2018; 8: 13768
- **Three-dimensional spatiotemporal focusing of holographic patterns** *NATURE COMMUNICATIONS*
Hernandez, O., Papagiakoumou, E., Tanese, D., Fidelin, K., Wyart, C., Emiliani, V.
2016; 7
- **Zero-order suppression for two-photon holographic excitation** *OPTICS LETTERS*
Hernandez, O., Guillon, M., Papagiakoumou, E., Emiliani, V.
2014; 39 (20): 5953-5956
- **When can temporally focused excitation be axially shifted by dispersion?** *OPTICS EXPRESS*
Leshem, B., Hernandez, O., Papagiakoumou, E., Emiliani, V., Oron, D.

2014; 22 (6): 7087-7098

- **Quantitative Imaging of Microtubule Alteration as an Early Marker of Axonal Degeneration after Ischemia in Neurons** *BIOPHYSICAL JOURNAL*

Psilodimitrakopoulos, S., Petegnief, V., de Vera, N., Hernandez, O., Artigas, D., Planas, A. M., Loza-Alvarez, P.
2013; 104 (5): 968-975

- **Analysis of optical crosstalk in flexible imaging endoscopes based on multicore fibers** *Conference on Biophotonics - Photonic Solutions for Better Health Care II*

Ortega-Quijano, N., Fanjul-Velez, F., Salas-Garcia, I., Ruben Hernandez-Cubero, O., Luis Arce-Diego, J.
SPIE-INT SOC OPTICAL ENGINEERING.2010