Postdoctoral Position in graphene neurotechnology
NEEL Institute, Grenoble (France)

The laboratory is looking for a neuro-physicist/electrophysiologist to investigate spike propagation within model neural network cultured on graphene-based interface. The main project consists of mapping single spike propagation along individual neurons, by combining controlled stimulation (patch clamp and light-gated ion channels stimulation) and real time monitoring with graphene field effect transistor GFET array. The candidate should have expertise in patch-clamp and optogenetics applied to neurons, and should be familiar with MEA recording, spike sorting, and graphene device technology. The laboratory is located at NEEL Institute, Grenoble and is focusing on sensing neurons using multidisciplinary approaches.

Motivated candidates interested in this work are encouraged to contact Dr. Delacour (cecile.delacour@neel.cnrs.fr). Please include your c.v. and a brief research summary, and have letters of recommendation emailed to Dr. Delacour.

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Relevant References:
(1)   Dupuit, V., Terral, O., Bres, G., Claudel, A., Fernandez, B., Briançon-Marjollet, A., & Delacour, C. (2022). A Multifunctional Hybrid Graphene and Microfluidic Platform to Interface Topological Neuron Networks. Advanced Functional Materials, 2207001.
(2)   Veliev, F.; Han, Z.; Kalita, D.; Briançon-Marjollet, A.; Bouchiat, V.; Delacour, C. Recording Spikes Activity in Cultured Hippocampal Neurons Using Flexible or Transparent Graphene Transistors. *Front. Neurosci.* 2017, *11*. https://doi.org/10.3389/fnins.2017.00466.
(3)   Veliev, F.; Cresti, A.; Kalita, D.; Bourrier, A.; Belloir, T.; Briançon-Marjollet, A.; Albrieux, M.; Roche, S.; Bouchiat, V.; Delacour, C. Sensing Ion Channel in Neuron Networks with Graphene Field Effect Transistors. *2D Mater.* 2018, *5* (4), 045020. https://doi.org/10.1088/2053-1583/aad78f.