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# **CALL FOR APPLICATIONS 2025 – FELLOWS**

Supervisor	Dmitrii Todorov
Supervisor page	https://sites.google.com/view/dtodorov-neuro
Host Institution	Sorbonne Université https://www.sorbonne-universite.fr/en
Research Lab	Biomedical Imaging Lab https://www.lib.upmc.fr/
Research Team	Neural Connectivity and Plasticity (NCP) https://www.lib.upmc.fr/team-4-%c2%93anatomo-functional-dynamical- systems-in-human-alteration-and-functional-recovery-adsh%c2%94- 2/?lang=en

## **Project Title**

NeuroAl for Motor Learning: Data-driven Modeling of Non-invasive Eletrophysiological and Behavioral Human Data

## **Project Description**

Motor learning is a fundamental aspect of human behavior, coupling neural plasticity and movement adaptation. Despite a large body of research, motor learning in humans is not fully understood, especially its neural mechanisms. We aim to elucidate the principles governing motor adaptation at both behavioral and neural levels using cutting edge machine learning approaches. Specifically an analysis of MEG and EEG data from reaching movements experiments, performed by healthy subjects is planned.

## Keywords

motor learning, deep learning, MEEG

## **Description of the Host Research Lab**

The Biomedical Imaging Lab (LIB – Laboratoire d'Imagerie Biomédicale) specializes in fundamental research and applications of biomedical imaging methods for morphologic, functional and molecular exploration of small animals and humans. The main investigation foci are are among the twenty-first century public health priorities: bone, cancer, cardiovascular and neurological diseases. We develop new diagnosis and treatment methodologies in our main field of investigation, including bright light microscopy, ultrasound, MRI, CT and SPECT-PET.

To submit your application, please send an email with the required documents to <u>msca-pf@sorbonne-universite.fr</u>