



Thesis Project Form

Title (tentative): 2D and 3D neuronal networks from human iPSCs coupled to CMOS devices for electrophysiological recordings

Thesis advisor(s): Martinoia Sergio, Lorenzo Muzzi

E-mail: Sergio.Martinoia@unige.it

Address:

Phone: (+39) 010 33 52980

Description

Motivation and application domain

Neuroengineering, In vitro Neuronal Networks, Network dynamics, Brain -on-a-chip

General objectives and main activities

Main objective is the development of experimental protocols and execution of experiments of 2D-3D neuronal networks coupled to high-density 4096 pixel CMOS devices. The student will perform experimental activities, take care of the data analysis and discuss results with PhD students and thesis advisors.

Training Objectives (technical/analytical tools, experimental methodologies)

Electrophysiological systems, Experimental methods, Data Analysis

Place(s) where the thesis work will be carried out: Neuroengineering Lab @DIBRIS

Additional information

Maximum number of students: 2