



*As part of our “Nano & Micro-Systems for Cell Biology” seminar series,  
we are delighted to invite you to attend this seminar to be given in english by :*

## Vincent **STUDER**

Interdisciplinary Institute for Neuroscience

Imagerie Quantitative de la Cellule

Monday 12 may 2014  
2pm



### **Investigating axonal guidance with engineered microenvironments.**

**Amphithéâtre - 3ème étage  
Bât A - tour du CNRS  
25 rue des martyrs - 38000 GRENOBLE**

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### **Investigating axonal guidance with engineered microenvironments.**

The precise wiring of the nervous system relies mostly in the so-called « axon guidance » process, where axons navigates in a complex environment and are guided by a concerted action of attractive and repulsive factors to reach their target. Investigating the process of axon guidance critically depends on our capacity to precisely control and modify the microenvironment. In my talk I will present a range of shear-free microfluidic systems and surface patterning methods that we have recently developed to control the extracellular chemical and physical parameters of living neurons. This set of tools enables precise and parallel stimulation and observation of multiple neurons. I will detail how we have applied them to the study of axon guidance in an integrative and quantitative manner.

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