

# CLAIRE WYART

## CV & ABSTRACT

SPEAKER AT:

## HOW MIND EMERGES FROM BRAIN: A VIEW INTO THE FUTURE



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**Claire Wyart**, Ph.D., ICME, Paris, France

Claire Wyart develops and implements sophisticated methods to optically control neuronal activity *in vivo*. She aims at understanding how specific circuits are recruited in the spinal cord to produce complex motor outputs and at unravelling how mechanosensory inputs shape locomotion. After a PhD in Biophysics in Strasbourg on spontaneous dynamics of neuronal networks (2000-2004), she joined UC Berkeley (USA) for a postdoc in 2005 where she started to develop optical methods for recording and stimulating electrical activity and behavior analysis *in vivo* in the zebrafish larvae. She is presently Group Leader in the Spine and Brain Research Center, ICM (Institut du Cerveau et de la Moelle epiniere) downtown Paris.

### **Probing the Connectivity and Function of Sensory Cells Interfacing the Spinal Circuits with Cerebrospinal Fluid**

There are evidence that the cerebrospinal fluid (CSF) can affect the level of neuronal activity in the brain and spinal cord. We have identified sensory neurons present in the vertebrate spinal cord with stereocilia bathing in the CSF at the location of the central canal. Using a combination of optogenetics and behavior in the zebrafish larva, we have demonstrated that the activation of these neurons triggered slow locomotion. Using electrophysiology and population imaging we now investigate which sensory cues are physiologically recruiting these cells and how they contribute to spontaneous locomotion during early stages of development.

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