



CEA - Saclay 91191 Gif-sur-yvette Cedex
Service de Physique de l'Etat Condensé
SÉMINAIRE



Mercredi 10 septembre 2014 à 11h15

Orme des Merisiers SPEC, Salle Itzykson, Bât.774

Studying brain function by measuring neuromagnetic fields: How and why

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The magnetic fields due to electric activity in nerve cells can be detected outside of the body. An array of SQUID sensors is typically used to measure these femtotesla-range fields, and modeling the current distribution underlying these fields allows us infer the locations and time courses of brain activations. In this talk, I will introduce magnetoencephalography (MEG) as a method to non-invasively study the working human brain. I will discuss the current state and future trends in MEG instrumentation, illustrate the required mathematical modeling approaches, and present examples of neuroscientific studies done with MEG. I will also discuss how MEG and ultra-low-field MRI can be combined to a single brain imaging device.

A coffee break will be served at 11h00. The seminar will be given in English.