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# Neuroscience Seminar Series

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**Friday, March 21st, 2014 at 11:30 am**

Salle Lavoisier B (3rd floor)  
Centre Universitaire des Saints-Pères  
45 rue des Saints-Pères, 75006 Paris

## Pascal Fries

Director, Ernst Strüngmann Institute (ESI)  
for Neuroscience in Cooperation with Max Planck Society

### ***Brain-wide and cell-type specific synchronization at the service of attention***

I will show that natural viewing induces very pronounced gamma-band synchronization in visual cortex. This early visual gamma synchronizes to higher areas only if it conveys attended stimuli. Attentional top-down control is mediated via beta-band synchronization. Top-down beta enhances bottom-up gamma. Across 28 pairs of simultaneously recorded visual areas, gamma mediates bottom-up and beta top-down influences. Finally, I will show how pyramidal cells and interneurons are differentially synchronized and affected by attention and by stimulus repetition.