

Neuroscience Seminar Series

Friday, March 10th, 2017 at 11:30

Salle des Conférences (R229)

Centre Universitaire des Saints-Pères

45 rue des Saints-Pères, 75006 Paris

Anya Hurlbert

MD PhD

Newcastle University, UK

Seeing Colours, Feeling the Light: Probing the Visual and Non-visual Systems with Spectrally Tuneable Light

Light shapes human behaviour, through both conscious perception and unconscious sensing of the environment. Variations in illumination spectra – the colour of light – are abundant in the natural and man-made worlds, and are important signals for both the visual and non-visual systems. The perceptual phenomenon of colour constancy – fundamental to colour perception and its role in object recognition - depends on the human visual system “discounting” spectral variations in illumination, so that we may recognise bananas as ripe yellow in twilight or bright sunshine, for example. The non-visual system monitors changes in light spectra to set biological rhythms and moods. Both systems originate in retinal light sensors – cones, rods, and intrinsically photosensitive retinal ganglion cells – whose spectral sensitivities and projection pathways partially overlap. Thus, the effects of spectral variations in light on the two systems interact. In this talk, I will describe a series of experiments which investigate these effects in humans, using spectrally tuneable light sources. We find, for example, that making lights “bluer”, for example, improves colour constancy, but leads to poorer performance on visual attention tasks and worse mood in the evening, despite increasing alertness.

Those interested in meeting with the speaker please contact
patrick.cavanagh@parisdescartes.fr - patrick.cavanagh@dartmouth.edu

