

Departmental Seminar

The Interaction between Vision and Eye Movements

11:30 a.m. – 12:30 p.m. | March 15, 2016 (Tuesday)

Rm 1103, 11/F, The Jockey Club Tower | Centennial Campus | The University of Hong Kong



Prof. Karl R. Gegenfurtner

Department of Psychology
Giessen University

Abstract

The existence of a central fovea, the small retinal region with high analytical performance, is arguably the most prominent design feature of the primate visual system. This centralization comes along with the corresponding capability to move the eyes to reposition the fovea continuously. Past research on perception was mainly concerned with foveal vision while the eyes were stationary. Research on the role of eye movements in visual perception emphasized their negative aspects, for example the active suppression of vision before and during the execution of saccades. But is the only benefit of our precise eye movement system to provide high acuity of small regions at the cost of retinal blur during their execution? In my talk I will compare human visual perception with and without eye movements to emphasize different aspects and functions of eye movements. I will show that the interaction between eye movements and visual perception is optimized for the active sampling of information across the visual field, and for the calibration of different parts of the visual field.

~All are Welcome~