

第7回 最先端脳科学セミナー

Cross-modal plasticity and sensory substitution

演者： 下條 信輔 先生

カリフォルニア工科大学

Division of Biology / Computation and Neural Systems 教授

日時： 2012年12月14日（金）17:00～18:30

場所： 薬学部研究棟Ⅱ 7階 セミナー室8

要旨

The research progress on cross-modal integration revealed several important principles. The literature of neural plasticity in blind /deaf patients indicate an amazing degree of connectivity changes across modalities. Having these as a background, I will review the latest in sensory substitution research, which has implications on neural mapping of egocentric space, intrinsic correspondence between auditory and visual modalities, etc.

Prof. Shinsuke Shimojo's laboratory concentrates on psychological and behavioral studies of perception, attention and cognition in the human with special focus on visual perception—including its cross-modal, sensory-motor, developmental, decision making, and neurological aspects (*Nature* 2000, 408:788-; *Current Biology* 2004, 14(23):R990-; *Nat Neurosci* 2004, 7(7):773-; *PNAS* 2010, 107(33):14552-; *Neuron* 2012, 74:582-). The lab employs a variety of techniques such as eye tracking, TMS (Transcranial Magnetic Stimulation), tDCS (transcranial Direct Current Stimulation), fMRI, EEG, as well as psychophysical paradigms. In this seminar, he will talk about cross-modal integration; how other sensory modalities such as auditory information may alter the perception of visual stimulus creating a visual illusion. Also, he will explain about brain adaption to perceive simultaneous multisensory inputs and how these studies could be of value for developing sensory substitution devices.

※ 本セミナーは、大学院の単位認定の対象となります。

主催： 医・生化学 井ノ口 馨

第7回セミナー世話人： 医・生化学 Mohammad Shehata 内線 7227