



Séminaires ISIR

Jeudi 12 juin 2014 de 14h00 à 15h00

Ted Milner

Campus Jussieu, 4 place Jussieu, Paris
Salle de réunion 304

Title : Control of standing equilibrium when the arm is perturbed

Abstract : We perform many actions with our arms while standing and are able to maintain upright equilibrium even when unpredictable forces are applied to the arms. However, little is known about how sensory information is processed to control the muscles involved in maintaining balance under such conditions. We conducted experiments to investigate transformation of sensory information into motor commands by varying direction and amplitude of the disturbance as well as postural stability. Our results suggest that somatosensory information from the hand is processed to rapidly establish characteristics such as direction and magnitude of the disturbance, taking into account postural stability. This allows ankle muscles to be activated at almost the same time as arm muscles, before there is any noticeable movement of the torso or head.

Short Bio : Ted Milner received his B.Sc. in Physics and M.Sc. and Ph.D. in Physiology from the University of Alberta. He conducted post-doctoral research at MIT in Brain and Cognitive Sciences and then accepted a position at the Institut de génie biomédical of the Université de Montréal in 1986. In 1992, he moved to the School of Kinesiology at Simon Fraser University and then in 2008 he became Departmental Chair of the Department of Kinesiology and Physical Education at McGill University. He recently published a book: Human Robotics Neuromechanics and Motor Control with Etienne Burdet and David Franklin, who both worked in his lab at Simon Fraser University. He currently has a Marie Curie International Incoming Fellowship to work in the Rehabilitation Engineering Lab at ETH-Zurich.