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He is an engineer and neuroscientist whose research focuses on human motor control. His research focuses on understanding the biological mechanisms of voluntary movement and deals equally with speech production and human arm motion. He uses mathematical models, robots and behavioral and physiological techniques to assess motor function and the characteristics of motor learning
<http://www.psych.mcgill.ca/labs/mcl/Lab-Home.htm>

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Room 3L301-1, University of Tsukuba

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Motor learning and sensory plasticity

Over the past four or five years there has been growing interest in the idea that plasticity associated with motor learning is not restricted to motor areas of the brain but rather includes changes to motor function and to sensory systems as well. The sensory change in association with motor learning has been observed both in limb movement and speech. So for example, it has been shown that motor learning changes the sensed position of the limbs in space, it changes functional connectivity in sensory networks of the brain and, in speech, it changes the auditory perception of speech sounds and results in changes to both auditory and somatosensory evoked potentials. In this talk, I will describe some of our behavioral and neuroimaging studies in this area, focusing on our work in human limb movement. The overall picture that is now emerging is that plasticity in sensory systems is central to the broader undertaking of human motor learning.