



Séminaire ISIR

Mark LATASH
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Vendredi 16 Décembre 2011 à 14h00

Campus Jussieu, 4 place Jussieu, Paris
Pyramide ISIR, 56/65, niveau Jussieu, sale de reunion H20

"Multi-element synergies studied within the uncontrolled manifold hypothesis »

Abstract:

We have been using the framework of the uncontrolled manifold hypothesis to study the organization of multi-element motor systems into synergies that stabilize important performance variables. I plan to review recent studies of multi-digit synergies in pressing and prehensile tasks that allowed addressing such issues as stabilization of the total force and total moment of force, the hierarchical control of the hand action, and changes in the digit coordination with healthy aging, fatigue and neurological disorder. A couple of hypotheses on the neural origins of the synergic action will be discussed.

Short Bio:

Mark L. Latash received M.S. in physics of living systems from the Moscow Physico-Technical Institute and PhD in physiology from Rush University in Chicago. He is interested in the control and coordination of multi-element systems participating in the production of voluntary movements, the control of posture, multi-joint reaching, finger coordination, and the neurophysiological mechanisms underlying motor control. Mark Latash is also interested in the neural control of apparently atypical movements such as those performed by persons with Down syndrome, healthy elderly, and persons with neurological disorders, as well as in the effects of practice on motor coordination. Currently, Mark Latash is a Distinguished Professor and Director of the Motor Control Laboratory (Department of Kinesiology at Penn State). He served as the Founding Editor of Motor Control (1996-2007) and as the first President of the International Society of Motor Control (2001-2005). He published about 300 papers in refereed journals and several books including Control of Human Movement (1993), Neurophysiological Basis of Movement (1996, 2008), and Synergy (2008). Mark Latash is a Fellow in the National Academy of Kinesiology and a recipient of the Bernstein Prize (2007).