

Computational Neuro-Rehabilitation: Studying interactions between arm use and function post-stroke.

Although, there is now definitive evidence that intensive task-specific practice is effective for improving upper extremity function and use after stroke, it is unclear how individual patients respond to therapy and whether use of the arm and hand in daily activities influences recovery. Here, we propose computational models of stroke recovery to study the time-varying dynamics of recovery of individuals post-stroke with mild to moderate impairments. Our models gives support to one of the axiom of neuro-rehabilitation “use it or lose it”. Our long-term goal is to develop and validate a method based on such dynamical models, to allow clinicians and patients to make informed decisions about treatment and potentially determine the critical dose of motor therapy for an individual patient.



Date & Time **JUNE 2, 2015 (TUE.)**

5:00 p.m. – **6:00** p.m.

Venue **3B213** (2nd floor, Bldg 3B)

Presenter **Nicolas Schweighofer, Ph.D.**

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Dr. Nicolas Schweighofer graduated from the Ecole Nationale Supérieure de Mécanique in Nantes, France, and obtained a PhD from the University of Southern California (USC), USA. His research spans from computational neuroscience modelling to robot-assisted rehabilitation, and he founded the field of Computational Neurorehabilitation. His current projects include model-based optimisation of learning via adaptive practice schedules in healthy and stroke individuals.

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