



UNIVERSITÀ DEGLI STUDI DI FERRARA
DOTTORATO IN NEUROSCIENZE TRASLAZIONALI
E NEUROTECNOLOGIE

Seminario

**Understanding the dynamics of
stroke neurorehabilitation: role of
biophysical models**

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This work stems from recent collaboration with clinical researchers at the University of Ferrara, who study how stroke characteristics affects the likelihood of success of neurorehabilitation protocols involving electrical stimulation and goal-oriented behavior. We propose that the outcome of combined stimulation and motor rehabilitation strategies depends on the ongoing brain dynamics that they interact with, and can therefore be tailored. As a first step in this line of research, we can consider the known biophysical factors recruited by such protocols, and their interactions, to design a model of stroke brain dynamics during neurorehabilitation. This scientific approach bridges clinical research, biophysical studies, computational neuroscience and the mathematics of neural dynamics. In this talk, I will discuss the various stages required to build such model, and explain the rationale underlying the modeling of each step.

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Ore 15,30

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