



EEG, EMG & robotics for enhancing mobility

Webinar by NEUROMOVE-Rehab Lab, IAS Lab and MAL Lab

SoftAct research project funded by Ministere digital Affait Est



3:00-3:15 pm CET - 9:00-9:15 am ET

Fostering Collaborative Work by Italian and American Researchers

Introductory Remarks by Ugo Della Croce, PhD - Science Attaché, Embassy of Italy in Washington DC

3:15-3:30 pm CET - 9:15-9:30 am ET

Clinical Applications of Rehabilitation Robotics: Are Patients Learning from Robots? Catherine Adans-Dester, PT PhD - Harvard Medical School

3:30-3:45 pm CET - 9:30-9:45 am ET

Could We Gain Clinically-Relevant Information from EEG and EMG Data Collection during Patient-Robot Interactions?

Alessandra Del Felice, MD PhD – University of Padova

3:45-4:00 pm CET - 9:45-10:00 am ET

Brain Oscillations Changes in Active, Passive and Imaginary Movements Emanuela Formaggio, PhD – University of Padova

4:00-4:15 pm CET - 10:00-10:15 am ET

Can Muscle Synergies Shed Light on the Mechanisms Underlying Motor Adaptations during **Robot-Assisted Gait Training?**

Paolo Bonato, PhD – Harvard Medical School

4:15-4:25 pm CET - 10:15-10:25 am ET

Human and Robot Learning in EEG-driven Intelligent Wheelchairs

Luca Tonin, PhD – University of Padova

4:25-4:35 pm CET - 10:25-10:35 am ET

Combining EEG and EMG Data to Control Assistive Technologies Aimed to Enhance **Mobility**

Stefano Tortora - University of Padova

4:35-4:50 pm CET - 10:35-10:50 am ET

Preliminary Results on the Investigation of EEG and EMG Patterns during the Performance of Balance Tasks

Maria Rubega, PhD and Roberto Di Marco, PhD – University of Padova

4:50-5:00 pm CET - 10:50-11:00 am ET

Concluding Remarks

Alessandra Del Felice, MD PhD, Stefano Masiero, MD, Emanuele Menegatti, PhD - University of Padova and Paolo Bonato, PhD - Harvard Medical School













