

Exoskeleton/Exosuit I

Date / Time Aug. 22 (Mon.), 2022 / 10:15-11:45

Room Room 515

Session Chair Jesus Ortiz (*IIIT*)

[MoO1B.1]

10:15-10:30

Simulation of Energy Regeneration in Human Locomotion for Efficient Exoskeleton Actuation

Brokoslaw Laschowski, Keaton A. Inkol, Alex Mihailidis, and John McPhee

[MoO1B.2]

10:30-10:45

Kinematic Validation of a Robotic Exoskeleton for Assisting Seated Pelvic Movements by Wheelchair Users with Trunk Impairments

Chawin Ophaswongse, Victoria Lent, and Sunil K. Agrawal

[MoO1B.3]

10:45-11:00

Analysis of the Bayesian Gait-State Estimation Problem for Lower-Limb Wearable Robot Sensor Configurations

Roberto Leo Medrano, Gray Cortright Thomas, Elliott J. Rouse, and Robert D. Gregg

[MoO1B.4]

11:00-11:15

The AGoRA V2 Unilateral Lower-Limb Exoskeleton: Mechatronic Integration and Biomechanical Assessment

Sophia Otálora, Felipe Ballen-Moreno, Luis Arciniegas-Mayag, Marcela Múnera, and Carlos A. Cifuentes

[MoO1B.5]

11:15-11:30

Active and Passive Back-Support Exoskeletons: A Comparison in Static and Dynamic Tasks

Tommaso Poliero, Vasco Fanti, Matteo Sposito, Darwin G. Caldwell, and Christian Di Natali

[MoO1B.6]

11:30-11:45

Improving the Efficacy of an Active Back-Support Exoskeleton for Manual Material Handling using the Accelerometer Signal

Maria Lazzaroni, Vasco Fanti, Matteo Sposito, Giorgia Chini, Francesco Draicchio, Christian Di Natali, Darwin G. Caldwell, and Jesús Ortiz