



ROME
10TH MARCH
2025

EVENTO BRIC - INAIL

LABORIUS

AI-POWERED COLLABORATIVE ROBOTS
FOR GAIT AND BALANCE ENHANCEMENT

SCIENTIFIC COMMITTEE
MARIANO SERRAO
ALBERTO RANAVOLO





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PROGRAM

09.00 Participant registration
Opening of the event

SCIENTIFIC COMMITTEE
MARIANO SERRAO
ALBERTO RANA VOLO

Chairman: Mariano Serrao, Alberto Ranavolo

09.30 Designing and developing collaborative robots for gait and balance assistance: human-robot interaction, from MOCA to Laborius to WANDER and beyond
Arash Ajoudani, Younggeoul Cho

09.50 Human-human interaction during walking
Yuri Ivanenko, Francesco Lacquaniti

10.10 Enhancement of vestibular motion perception for balance rehabilitation
Myrka Zago, Francesco Lacquaniti

10.30 Extrapolated center of mass as metric to assess dynamic balance during walking
Andrea Fortuna

10.50 Gait and balance analysis through wearable devices: kinematic biomarkers and metrics
Ilg Wienfried, Stefano Filippo Castiglia

11.10 Coffee break

Chairman: Cristiano De Marchis

12.00 Computer Vision Approach for motion analysis
Niki Martinel, Irene Gennarelli

12.40 Generative AI approach for motion analysis
Dante Trabassi

13.20 Indexes and AI algorithms for motor performance assessment in job integration/reintegration programs designed using collaborative robots
Tiwana Varrecchia, Giorgia Chini

14.00 Lunch

