Poster Session 1-1
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[MoP1-1.1]
Sensorless Impedance Control for the TWIN Lower Limb Exoskeleton: A Preliminary Study
Alessia Sacchini, Federico Tessari, Christian Vassallo, Stefano Maludrottu, Elena De Momi, Matteo Laffranchi, and Lorenzo De Michieli

[MoP1-1.2]
Walking and Standing with an Exoskeleton for the Lower Limbs: Effects of Mass and Inertia on Gait and Postural Control
Pedro Parik-Americano, João Pedro Pinho, Fabia Camile dos Santos, Camila Taira, Guilherme Silva Umemura, and Arturo Forner-Cordero

[MoP1-1.3]
Motor Performance Index for Evaluation of Distributed Pattern in Multi-Channel EEG
Hojun Jeong and Jonghyun Kim

[MoP1-1.4]
Development of a Soft Inflatable Exosuit for Knee Flexion Assistance
Ibrahim Mohammed Hasan, Emiliano Quinones Yumbla, and Wenlong Zhang

[MoP1-1.5]
Model-Based Control for Gait Assistance in the Frontal Plane
Vahid Firouzi, Omid Mohseni, and Maziar A. Sharbafi

[MoP1-1.6]
Modeling and Characterization of 3D Printed Flexible Mesh Structure for Wearable Interface
Binghao Lu, Jirui Fu, Saba M. Hosseini, and Joon-Hyuk Park

[MoP1-1.7]
Soft Tactile SkIn: Tactile Sensor System to Soften Robots
Taiki Majima and Kazunori Takashio
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| **[MoP1-1.8]** | A Hybrid Swing-Assistive Electro-Hydrostatic Bionic Knee Design  
Marco Puliti, Federico Tessari, Renato Galluzzi, Simone Traverso, Andrea Tonoli, Lorenzo De Michieli, and Matteo Laffranchi |
| **[MoP1-1.9]** | Travelling Wave Locomotion of a Tensegrity Robotic Snake based on Self-Excitation Controllers  
Xin Li, Jingfeng He, and Alexandre Pitti |
| **[MoP1-1.10]** | Design and Control of a Variable Buoyancy Module for a Serial ROV  
Santiago Noriega and Hernando Leon-Rodriguez |
| **[MoP1-1.11]** | Comparison of In-Home Robotic Companion Pet Use in South Korea and the United States: A Case Study  
Casey C. Bennett, Cedomir Stanojevic, Seongcheol Kim, Selma Sabanovic, Jinjae Lee, Jennifer A. Piatt, Janghoon Yu, and Jiyeong Oh |
| **[MoP1-1.12]** | Stairs and Ramps Ascent and Descent: How to Design Feasible Gait Patterns for a Powered Lower-Limb Exoskeleton  
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| **[MoP1-1.13]** | Evaluation of the User Command Interface, an Adaptable Setup System for Industrial Exoskeletons  
Olmo A. Moreno Franco, Jesus Ortiz, and Darwin G. Caldwell |
| **[MoP1-1.14]** | A Magnetically-Controlled 3D-Printed Helical Microrobot for Application in Photothermal Treatment of Cancer Cells  
Van Du Nguyen, Kim Tien Nguyen, Shirong Zheng, Chang-Sei Kim, Byungjeon Kang, Doyeon Bang, Jong-Oh Park, and Eunpyo Choi |
| **[MoP1-1.15]** | Design of a Force Sensing Needle Guide for an MRI-Compatible Robotic Prostate Biopsy System  
Rongrong Liu and Seong Young Ko |
[MoP1-1.16] Evaluation of Haptic Interaction in Mirror Game by a Cerebellum Inspired Virtual Player
Önay Karaca, Amr Okasha, Atacan Duman, Umut Candan, and Kutluk B. Ankan

[MoP1-1.17] Proportional Control of a Soft Cable-Driven Exoskeleton via a Myoelectrical Interface Enables Force-Controlled Finger Motions
Jonas Walter, Paul Roßmanith, Daniela Souza de Oliveira, Sebastian Reitelshöfer, Alessandro Del Vecchio, and Jorg Franke

[MoP1-1.18] Electromyography-Based, Robust Hand Motion Classification Employing Temporal Multi-Channel Vision Transformers
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**[MoP1-2.1]**

Experimental Evaluation of a Stiffness-Fault-Tolerant Control Strategy on an Elastic Actuator for Wearable Robotics

Rodrigo J. Velasco-Guillen, Victor Grosu, Bram Vanderborght, Josep M. Font-Llagunes, and Philipp Beckerle

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**[MoP1-2.2]**

A Unity-Based Da Vinci Robot Simulator for Surgical Training

Ke Fan, Aldo Marzullo, Nicolò Pasini, Alberto Rota, Matteo Pecorella, Giancarlo Ferrigno, and Elena De Momi

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**[MoP1-2.3]**

CNN-Based Controller for Multi-DoF Prosthetic Wrist using sEMG Data during Activities of Daily Living

Mohamed Fazil, Zixia Meng, and Jiyeon Kang

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**[MoP1-2.4]**

Paralinguistic Cues in Speech to Adapt Robot Behavior in Human-Robot Interaction

Ashita Ashok, Jakub Pawlak, Sarwar Paplu, Zuhair Zafar, and Karsten Berns

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**[MoP1-2.5]**

3D Phononic Crystal-Based pH Sensor Advanced with Machine Learning

Syed Muhammad Anas Ibrahim, Zhang Fang, Jaehyun Kim, and Jungyul Park

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**[MoP1-2.6]**

Stress Detection of Children with Autism using Physiological Signals in Kaspar Robot-Based Intervention Studies

Buket Coşkun, Pinar Uluer, Elif Toprak, Duygun Erol Barkana, Hatice Kose, Tatjana Zorcec, Ben Robins, and Agnieszka Landowska

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Admittance Control of Wearable Robotic Brace for Dynamic Trunk Support

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<td>Jeongwon Lee and Sungwook Yang</td>
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Towards Efficient Lower-Limb Exoskeleton Evaluation: Defining Biomechanical Metrics to Quantify Assisted Gait Familiarization
Giorgos Marinou, Lizeth Sloot, and Katja Mombaur

Haptic Touch: A Retrofittable Tactile Sensing Glove and Haptic Feedback Armband for Scalable and Robust Sensory Feedback
Aidan Aug, Ariel Slepyan, Eli Levenshus, and Nitish Thakor

A Portable Passive Clutch System for Selective Upper Extremity Movements
Jisu Jeong, Yoonjin Kim, Yeonha Cho, and Youngjin Na

Learning Whole-Body Effects for Biomechanics Analysis from Partial IMU Sensing
Kazuya Tomabechi, Yosuke Ikegami, Ko Yamamoto, and Yoshihiko Nakamura

A Pilot Study on Perception of Direction Cues Delivered using a Portable Electro-Tactile Biofeedback Device
Junyeong Lee, Hosu Lee, Amre Eizad, and Jungwon Yoon

Delay Time of Human Motion Generation in Response to Changing Periods in Force Tracking Task
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The Electromagnetic Manipulation System Development for Sorting Circulating Tumor Cells
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Benchmarking the Effects of Lower Limb Exoskeletons on Whole-Body Manipulation Tasks: Testbed, Protocols and Metrics
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**Targeted Microparticle Delivery using Ultrasound Single Beam: A Preliminary Feasibility Study**  
Daewon Jung, Hiep Xuan Cao, Han-Sol Lee, Ho Yong Kim, Jong-Oh Park, and Byungjeon Kang

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**Ultrasound-Based Tracking and Autonomous Manipulation of Nanocluster in Water**  
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[TuP2-2.15] Effects of Adaptation Sessions using a Split-Belt Treadmill: Implication for Gait Rehabilitation after Stroke
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[TuP2-2.16] Feasibility of a Passive Wearable Device for Post-Stroke Shoulder Abduction Support
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