Tuesday 10th

Time	ROOM 01	ROOM 02	ROOM 03
09.00-10.00	*Registration*		
10.00-11.30	*Opening Ceremony*		
11.30-12.30	*Coffee Break*		
12.30-14.00	*Lunch*		
	ROOM 01 - History of Machines and Mechanisms *Chairpersons:*	**ROOM 02 - Sustainable Solutions for Industrial Robotics** *Chairpersons:*	**ROOM 03 - Adaptive Energy Storage Management** *Chairpersons:*
14.00-14.15	A history of symbolic notation for mechanisms *Authors:* **Marco Ceccarelli** , Eduard Krylov	An Innovative Current Collection System for Trambus Systems operating under Tramway Catenaries *Authors:* **Luca Pugi** , Michelangelo Gulino, Fernando Ortenzi, Lorenzo Berzi, Lorenzo Pugliese, Francesco Zazzeri, Adriano Alessandrini	LED lighting with a Photovoltaic System and Energy Storage for a Jogging Track in the Countryside *Authors:* **Jorge Solis** , Johan Rahm, Sebastian Anersson, Isac M. Andersson, Magnus Nilsson
14.15-14.30	Evolution and Classification of Chestnut Harvesting Mechanisms *Authors: Lorenzo Maccioni, Stefan Leitner, Giovanni Carabin, Renato Vidoni*	On Efficiency and Life Cycle Improvements in Industrial Robots through Variable-Stiffness Accessories *Authors:* **Carl Nelson**	Challenges for Autonomous Monitoring Systems in Indoor Farming: From system integration, monitoring and optimization of energy storage *Authors: Jorge Solis , Akihiro Funaki, Mohammad Taghi Husseiny*
14.30-14.45	From the origin of Assur Groups to their earlier applications in computational kinematics: a historical perspective *Authors: Pietro Fanghella, Matteo Verotti,* **Luca Bruzzone**	New management strategy for a significant reduction of the impact on CO2 footprint of hydraulic actuators *Authors: Paolo Righettini,* **Roberto Strada** , *Filippo Cortinovis, Jasmine Santinelli*	Energy harvesting optimization in vehicle suspension systems via a non standard LQ control strategy *Authors:* **Paul Christian Tesso Woafo** , Gianfranco Gagliardi, Alessandro Casavola, Francesco Tedesco
14.45-15.00	Education and Technical Representation in Liebig Figurines Between 1872 and 1975 *Authors:* **Marco Cocconcelli**	Automated Screw Detection and Removal for Sustainable EV Battery Recycling: A Vision-Based Approach Aligned with SDGs *Authors: Markus Schmitz, Robin Heitz, Daniel Gossen,* **Burkhard Corves**	Energy Efficiency and Sustainability in the Food Processing Chain: Addressing Consumption, Impacts, and Footprint Reduction *Authors: Orlando Corigliano, Angelo Algieri, Vittorio Solina, Francesco Longo*
15.00-15.15	History of bucket wheel excavators: From the first construction to the Guinness World Record for the heaviest land-based vehicle ever built *Authors:* **Nenad Zrnic** , Nebojša Gnjatović, Srđan Bošnjak	Robots for sustainability: real-time AI-based robotic waste sorting from a moving conveyor *Authors: Giovanni Boschetti,* **Tommaso Fabris** , *Teresa Sinico*	Increasing the energy output of photovoltaic systems equipped with monoaxial solar tracking mechanisms with North-South horizontal rotation axis through backtracking algorithms *Authors:* **Macedon Moldovan** , Ion Visa
15.15-15.30	Advances in Master Haptic Device Design for Teleoperation: A 15-Year Exploration of Parallel and Hybrid Robotic Architectures *Authors:* **Abdelbadiâ Chaker** , Térence Essomba, Med Amine Laribi	Circular Economy Design through System Dynamics Modeling *Authors: Federico Zocco,* **Monica Malvezzi**	FOWT Modeling and Validation in Extreme Conditions *Authors: Francesco Niosi,* **Marco Cammalleri** , *Giuliana Mattiazzo, Antonella Castellano, Antonella Castellano*
15.30-15.45	The 1934 World Speed Record of the Aeronautica Macchi M.C. 72 *Authors:* **Giuseppe Genchi** , Antonella Castellano, Matteo Morici, Gandolfo Li Pira, Marco Cammalleri	SDGs Initiative based on research and development of Ricoh inkjet technology *Authors:* **Yoshihisa Ohta**	Design and Implementation of a Power Electronic System for an Autonomous Martian Rover (Abstract) *Authors: Maadhav Katyal, Astik Thukral, Yachit Guliani, Pranjay Dhawan, Sachin Kansal, Ashish Singla*
15.45-16.30	*Coffee Break*		
	ROOM 01 - Advanced Kinematics and Mechanism Design *Chairpersons:*	**ROOM 02 - Sustainability Issues in Robotic Manufacturing** *Chairpersons:*	**ROOM 03 - Innovative Didactic Systems and Paradigms for STEM** *Chairpersons:*
16.30-16.45	Design and experiments of a cutting robot for disassembly tasks *Authors:* **Luca Quattrucc i** , Marco Ceccarelli, Matteo Russo	Pen Holder Design for a Handwriting Education Assistance Robot *Authors: Oğuz Güler, Esra Özdemir, Mehmet Alp Balkan, Çağatay Öztürk,* **Can Dede**	Integrating UN Sustainable Development Goals into Mechanical Engineering Electives: A Modular Approach *Authors:* **Ozgun Selvi** , Marco Ceccarelli, Onat Halis Totuk
16.45-17.00	Algorithm for Automatic Generation of Systems of Equations for Determining the Workspace of a Class of 3-DOF Planar Parallel Robots *Authors: Larisa Rybak,* **Dmitry Malyshev** , *Dmitry Dyakonov*	A Sustainable, Bidirectional Soft Pneumatic Actuator for Robotic Systems *Authors: Simone Duretto, Giovanni Colucci, Luigi Tagliavini, Andrea Botta, Lorenzo Toccaceli, Giuseppe Quaglia*	Extended Laboratory for Biomedical Applications: Development and Validation of an Automated NiTiNol Thermo-Electro-Mechanical Characterization System *Authors: Francesco Felicetti,* **Elio Matteo Curcio** , *Stefano Rodinò, Luigi D'Alfonso, Emanuele Sgambitterra, Carmine Maletta, Carbone Giuseppe, Domenico Luca Carnì, Annalisa Liccardo, Giuseppe Spadafora, Francesco Lamonaca*
17.00-17.15	Forward Kinematics and Workspace Analysis of a Novel Hyper-redundant Robotic Arm *Authors:* **Xiao Li** , Haibo Qu, Carbone Giuseppe, Yili Kuang, Sheng Guo	Redundancy Resolution Options for the TWIN-IT-ROMANS Robotic Hybrid Manufacturing System *Authors: Gizem Merve Gündüz,* **Kiper Gokhan** , *Can Dede, Markus Schmitz, Burkhard Corves*	Remote Control of a Digital Oscilloscope for Use in Distance Learning *Authors:* **Annalisa Liccardo** , *Francesco Bonavolontà, Antonio Monaco, Giuseppe Spadafora, Domenico Luca Carni, Elenora Bilotta, Anna Maria Palermo, Francesco Lamonaca*
17.15-17.30	Design of a novel wrist joint with rigid-flexible-soft coupling structure *Authors: Tianyi Yan, Xuyang Duan, Yanjun Wang, Hao Wang,* **Genliang Chen**	Towards Sustainable Manufacturing: A Review and Future Directions in Additive Manufacturing of Fiber-Reinforced Polymer Composites *Authors: Muhammed Yiğit Türkcan, Berk Kurt, Busra Karas, Halil Tetik, Alborz Shokrani,* **Can Dede**	The Role of Network of Extended reality-enabled laboratories in Enhancing STEM Education: Bridging Theory and Practice in the Digital Classroom *Authors: Ihtisham Ul Haq, Giuseppe Spadafora, Anna Maria Palermo, Eleonora Bilotta, Annalisa Liccardo, Francesco Lamonaca, Abdul Mohiz*
17.30-17.45	Four-pose Synthesis of a Generalized Rapson Slide Mechanism *Authors: Luciano Tomassi,* **Giorgio Figliolini** , *Chiara Lanni*	Driving Sustainability and Equality through Collaborative Robotics *Authors: Cecilia Scoccia, Clara Fischer, Serenella Terlizzi, Samuele Tonelli, Gaetano Lettera*	Artificial Intelligence in Network of Extended reality-enabled laboratories in STEM Education: Current Applications and Future Potential for Adaptive Learning *Authors: Ihtisham Ul Haq, Giuseppe Spadafora, Anna Maria Palermo, Eleonora Bilotta, Francesco Lamonaca, Abdul Mohiz, Francesco Felicetti*
17.45-18.00	Applications of TSP solvers for Path Planning of Parallel Robots *Authors:* **Giovanni Mottola** , Pietro Davide Maddio, Alessandro Cammarata, Rosario Sinatra, Francesca Garescì	Materials for Sustainable Robotics: Challenges and Examples *Authors:* **Chiara Morano** , *Salvatore Garofalo, Simone Leone, Luigi Bruno, Carbone Giuseppe*	Teaching Dynamics of Mechanical Systems Using a Practical Project: The Dragster Car Challenge *Authors: João Marafona,* **Paulo Flores** , *Hamid Lankarani*
18.00-18.15	Simultaneous Topology Optimization of Stator and Rotor of IPMSM *Authors:* **Takaya Furukawa** , Hayato Minamoto, Mitsuru ENDO, Yukio Tsutsui, Shimpei Tanaka	Collison Avoidance for Growing Obstacles in Multidirectional Additive Manufacturing (Abstract) *Authors:Mark Witte, Jan Wiartalla, Burkhard CORVES, Mathias Hüsing*	Race Party: A Project-Based Learning Approach to Teach Dynamics and Design of Mechanical Systems *Authors:* **Paulo Flores**
19.00-21.00	*Dinner*		

Bold refer to the indicated speaker

Wednesday 11th

	ROOM 01 - Design Process and Optimizations - Session 1 *Chairpersons:*	ROOM 02 - Sustainability for Smart Farming within the PNRR T4Y project *Chairpersons:*	ROOM 03 - Simulation, Testing, and Optimization of Mechanical Systems - Session 1 *Chairpersons:*	
09.00-09.15	Optimization of a rotary part feeder with circular blades Authors: **Matteo Bottin,** Michele Tonan, Giulio Rosati	Development of a smart germination chamber for lettuce seedlings: integration of environmental monitoring and automated fertigation control Authors: **Oscar Mota-Pérez**, Jhon Freddy Rodriguez Leon, Armando González-Marin, Jorge Pineda-Piñón, Julio C. Sosa-Savedra	Numerical and experimental analysis of aeronautic emergency braking systems Authors: Silvia Logozzo, Maria Cristina Valigi	
09.15-09.30	Design Optimization of a Cubic Permanent Magnet Array for Gravity Compensation in Rotational Motion Authors: **Xiangxian Zeng**, Qiaosheng Sun, Chin-Hsing Kuo	Termination method and weed monitoring in tomato in succession to cover crop mixture: preliminary results Authors: Gaetano Messina, Emilio Lo Presti, Giuseppe Badagliacca, Salvatore Di Fazio, Giuseppe Modica, Michele Monti, Maurizio Romeo, **Salvatore Praticò**	Contact Pressure Evolution in Classic Pin-on-Disc Tests Authors: Eugeniu Grabovic, Alberto Betti, **Enrico Ciulli**	
09.30-09.45	Topological Optimization of Attachment Points of an Industrial Delta Robot Based on The Analysis of Its Safety Zone Authors: Larisa Rybak, Voloshkin Artem, **Dmitry Malyshev**, Vladislav Cherkasov	Making Post-Harvest More Efficient: Prototyping an Air Treatment Plant for PGI 'Cipolla Rossa di Tropea Calabria' Spring Onions Authors: Matteo Sbaglia, Lorenzo Maria Massimo Abenavoli, **Bruno Bernardi**	Three-dimensional experimental analysis of wear in retrieved hip implants Authors: M. Amabile, Virginia Burini, Francesca Di Puccio, **Silvia Logozzo**, Giuseppe Marongiu, Lorenza Mattei, Maria Cristina Valigi	
09.45-10.00	Algorithms for Determining the Work Safety Zones of Manipulators of Various Structures as Part of a Multi-Robotic System Authors: Larisa Rybak, Carbone Giuseppe, **Dmitry Malyshev**, Dmitry Dyakonov, Anna Nozdracheva, Vladislav Cherkasov	Monitoring Tuta absoluta infestation in different tomato cropping systems: first results of a combined field- and UAV-based approach Authors: Annamaria Ienco, Salvatore Praticò, Maria Rosario Pineda Arteaga, Gaetano Messina, Orlando Campolo, Salvatore Di Fazio, Francesca Laudani, Giuseppe Modica, Vincenzo Palmeri, Maurizio Romeo, Emilio Lo Presti	Motion simulation analysis of a new type of wind turbine vane transport vehicle Authors: **Shuangji Yao**, Xin Zhang, Tao Ni, Marco Ceccarelli, Giuseppe Carbone	
10.00-10.15	Design and Experimental Validation of a Three-chamber Omni-directional Soft Actuator Authors: **Michele Gabrio Antonelli**, Pierluigi Beomonte Zobel, Akihiko Hanafusa, Nicola Stampone	UAV-based pasture characterization for precision grazing management: preliminary results in Calabria (southern Italy) Authors: Caterina Cilione, Giuseppe Badagliacca, Gaetano Messina, Salvatore Praticò, Giuseppe Modica, Pasquale Caparra	Preliminary design of a herringbone journal bearing for a high-speed compressor Authors: Federico Colombo, Luigi Lentini, Edoardo Goti, Andrea Trivella, Terenziano Raparelli	
10.15-10.30	Motion Tracking Hands-free HMI of Electric Wheelchair Authors: Lorenzo Baglieri, Daisuke Matsuura, Tsune Kobayashi, Giuseppe Quaglia	Methodological approaches for estimating the biomass of natural pastures in the Lucanian hills using UAV remote sensing Authors: Rosanna Paolino, Emilio Sabia, Ada Braghieri, Amelia Maria Riviezzi, Luca Vignozzi, Salvatore Claps, Daniele Baldassarre, Corrado Pacelli, Adriana Di Trana	Static Equilibrium Analysis Based on Cosserat Theory and Phase Space Analysis for String-Shaped Flexible Elements Authors: Ryosuke Hakamata, Oscar Altuzarra, Mitsuru Endo, **Yusuke Sugahara**	
10.30-10.45	Optimized Synthesis Method of the 7-RR(RRRR)RR Seven-Bar Linkage Used for Medical Disinfection Robot Authors: Elida-Gabriela Tulcan, Sticlaru Carmen, Alexandru Oarcea, Narcis-Gratian Craciun, **Erwin-Christian Lovasz**	The STAR project: giving smell sense to agricultural robotics Authors: Angelo Ugenti, Sara Stolyarova, Adir Krayden, Annalisa Milella, Stefan Rilling, Yael Nemirovsky, **Giulio Reina**	Evaluations of vibrations and comfort of a driver of an electric tractor by modal and experimental analysis Authors: **Daniela Tarnita**, Alin Oncescu, Ilie Dumitru, Ionut Daniel Geonea, Nicolae-Valentin Vladut, Danut-Nicolae Tarnita	
10.45-11.30	*Coffee break*			
	ROOM 01 - Design Process and Optimizations - Session 2 *Chairpersons:*	ROOM 02 - Emerging Trends in Robotics and Automation - Session 1 *Chairpersons:*	ROOM 03 - Simulation, Testing, and Optimization of Mechanical Systems - Session 2 *Chairpersons:*	
11.30-11.45	Optimal Synthesis of the 2R Serial Robot Based on Kinematic Performance Measures Authors: Alexandru Oarcea, Elida-Gabriela Tulcan, Ana Maria Scurt, Robert Kristof, **Erwin-Christian Lovasz**	A Design Procedure Towards a Drone for the Inspection of Coastal Built Cultural Heritage Sites Authors: **Mohammed Khadem**, Dmitry Malyshev, Simone Leone, Carbone Giuseppe	Improving the estimation of the transient response of mechatronic systems Authors: **Juan Carlos Jauregui**	
11.45-12.00	Ability mining of manipulation using lower limb motion - Comparison with upper limb using isotonic-rate method - Authors: **Masaharu Komori**, Ryo Koshiba, Tatsuro Terakawa	Experimental approach for assessing a platinum silicon human thoracic aorta replica Authors: Mario Alberto Grave-Capistrán, **Chiara Morano**, Christopher René Torres-San Miguel, Francesco Lamonaca, Carbone Giuseppe	Improving the design of construction equipment for accessibility - Target user and development requirements Authors: Misato Nihei, Kousuke Hongama, Takazumi Ono, Rui Fukui	
12.00-12.15	The first type singularity of the novel 3-PRPS type tripod Authors: **Zhumadil Baigunchekov**, Carbone Giuseppe, Med Amine Laribi, Rustem Kaiyrov, Wang Xuelin, Li Qian, Muerzhahan Yeerzhati	Design and testing of a two-finger hand for compliant grasp Authors: Earnest Ofonaike, Kamsiyochukwu Uzegbu, Matteo Russo, **Marco Ceccarelli**	Modeling of Dynamics of Nonideal Mixer at Oscillation-Damped Mode of Driving Member Motion Authors: Zharilkassin Iskakov, Kuatbay Bissembayev, Azizbek Abduraimov, Akmaral Kalybaeva	
12.15-12.30	Multidisciplinary Design Optimization for Weight Reduction of Six DoF Manipulator using Directional Manipulability Index Authors: Kaho Hibino, **Mitsuru Endo**, Yukio Tsutsui	Adaptive and Flexible 3D Printing Design for Wearable Devices Authors: **Simone Leone**, Michele Perrelli, Carbone Giuseppe	A proposal of an electrically driven press for producing monolithic aerogel and control system simulation Authors: Sebastiano Angelella, Cinzia Bruratti, Dave Hodgson, Silvia Logozzo, Francesca Merli, **Maria Cristina Valigi**, Narducci, Gonçalo Sousa Torres	
12.30-12.45	Robots or People as Manpower Needed Authors: **Adrian Pisla**, David Mihai Lupu, Alina-Beatrice Oltean, George Iacoban, Silvia-Daniela Pohrib	Design and Analysis of a Hybrid Thrustered Cable-Suspended Parallel Robot with Hexarotor Integration Authors: Yifan Feng, **Yusuke Sugahara**, Ming Jiang, Marco Ceccarelli, Yukio Takeda	Development of the motion controller and the sensors feedback system of a commercial robot for virtual sensing applications Authors: Gabriele Scordamaglia, Rocco Adduci, Michele Perrelli, Domenico Mundo	
12.45-13.00	Natural Motion of the RR-4R-R Manipulator: Effects of Trajectory Types and Parameters Authors: **Luca Bruzzone**, Matteo Verotti, Pietro Fanghella	Optimal motor placement for efficient upper arm rehabilitation exercises Authors: Giovanni Boschetti, **Matteo Bottin**, Riccardo Minto	Monitoring and diagnosis of railway axles Authors: Cristina Castejon Sisamon, M. Jesus Gomez-Garcia, Higinio Rubio, Eduardo Corral	
	A Backseat Control Architecture for Unmanned Marine Vehicles: a Case Study with a UUV	Design of an innovative robotic surgical instrument for circular stapling	Lumped Parameter Model for the Evaluation of the Energy Lost in Oscillations of Rotating Blades and Experimental Comparison	

Time	ROOM 01	ROOM 02	ROOM 03	
13.00-13.15	*Authors: Luigi Scarfone, Santina Fortuna, Antonio Lagudi, Loris Barbieri, Fabio Bruno*	*Authors: Paul Tucan, Nadim Al Hajjar, Calin Vaida, Alexandru-Vasile Pusca, Corina Radu, Daniela Jucan, Tiberiu Antal, Adrian Pisla, Damien Chablat,* **Doina Pisla**	*Authors: Tommaso Taverna,* **Andrea Manuello Bertetto**	
13.15-14.30	*Lunch*			
	ROOM 01 - Human Machine Interaction *Chairpersons:*	**ROOM 02 - Emerging Trends in Robotics and Automation - Session 2** *Chairpersons:*	**ROOM 03 - Innovation in Energy and Transportation Systems** *Chairpersons:*	
14.30-14.45	Integrating Clinical Expertise in the Design of Home-Based Smart Rehabilitation Devices for Motor and Cognitive Therapy in Patients with Neurological Disorders *Authors: Fabio Zanoletti, Alberto Borboni, Loris Pignolo, Martina Vatrano*	Conceptual design of an innovative device for hand rehabilitation *Authors: Ionut-Marian Zima, Dragos Sebeni, Vasile Bulbucan, Calin Vaida, Bogdan Gherman, José Machado, Paul Tucan, Tiberiu Antal,* **Doina Pisla**	Experimental characterization of a monitoring system for car drivers *Authors:* **María Garrosa** *, Marco Ceccarelli*	
14.45-15.00	Development and Automation of a Robotic Hexapod Device for Orthopedic Applications *Authors: Monica Tiboni, Danilo Cambiaghi, Marco Domenicucci, Franco Cavina Pratesi, Gianluigi Frigerio, Sofia Toscano, Giovanni Legnani*	A simulation framework for the development and operation of hybrid underwater vehicles *Authors:* **Fernando Gomez** *, Olga Marín Casas, Alejandro Garrocho Cruz*	Feasibility of Transferring Variant Input Loads for the Semi-Analytical Multibody Simulation of Bicycles *Authors: Johannes Bolk, Oliver Pütz,* **Burkhard Corves**	
15.00-15.15	Towards an Innovative Urostomy Bag Filling Monitoring System with Hall Effect Sensors *Authors: Hector Medina Romo, Amina Louki, Carlo Alberto Seneci*	Advances and Future Directions in Robotic and Automated Facade Maintenance and Construction *Authors: Andrea Lucarini,* **Edoardo Idà** *, Tobias Bruckmann, Aileen Pfeil, Rabee Taha, Dimos Kifokeris, Marco Carricato*	Experimental assessment of hydrogen combustion cells in a four-stroke engine *Authors: Jonathan Jorge Ruiz Dominguez, Mario Alberto Grave-Capistrán, Christopher René Torres-San Miguel, Martin Daniel Trejo-Valdez*	
15.15-15.30	Beyond Boundaries: PICO-Driven Design Criteria for Robotic Rehabilitation Medical Devices *Authors: Paolo Righettini,* **Roberto Strada** *, Filippo Cortinovis*	An innovative mechatronic tool for the cleaning and sampling of the Underwater Cultural Heritage *Authors: Emiliano Scalercio, Alessandro Gallo, Maurizio Muzzupappa, Loris Barbieri, Fabio Bruno*	Numerical and experimental assessment of the impact damage on Liteon batteries *Authors: Christopher René Torres-San Miguel, Mario Alberto Grave-Capistrán*	
15.30-15.45	Development of an Ultra-Thin Piezoresistive Velostat-Based Wearable Sensor for Real-Time Pressure Monitoring in Adolescent Idiopathic Scoliosis Bracing *Authors:* **Alberto Borboni** *, Fabio Zanoletti, Rodolfo Faglia*	A novel injection device for the consolidation of the Underwater Cultural Heritage *Authors: Emiliano Scalercio, Alessandro Gallo, Maurizio Muzzupappa, Loris Barbieri, Fabio Bruno*	Energy harvesting using triboelectricity: from a general overview to mechanical applications *Authors:* **Renato Brancati** *, Lorella Cannavacciuolo, Chiara Cosenza, Cristina Ponsiglione*	
15.45-16.00	Handbike and Handcyclist: a Vibrational Model *Authors: Michele Sanguinetta, Giovanni Incerti, Alessandro Cudicio,* **Cinzia Amici** *, Giovanni Legnani*	Challenges in Designing and Adopting Robotic Rehabilitation Systems *Authors:* **Francesco Lago** *, Simone Leone, Elio Curcio, Carbone Giuseppe*	On the use of wavelet analysis for the detection and position estimation of short wavelength rail head faults *Authors: Giovanni Bellacci, Niccolò Baldanzini,* **Luca Pugi**	
16.00-16.15	Development of a New Leg Mechanism for Exoskeleton Robots: Structural Synthesis, Dynamic Analysis, and Prototype Implementation *Authors: Ionut Daniel Geonea, Cristian Copilusi,* **Daniela Tarnita**	Limits of robotized unscrewing by a SCARA robot *Authors:* **Simon Wilbers** *, Luca Quattrucci, Marco Ceccarelli, Matteo Russo, Jörg Reiff-Stephan*	Evaluation of Paint Suitability for Improving of Large-body Coatings Using Ink-Jet Printing Technology *Authors: Ogura Taiga, Harada Yoshihiro, Fushinobu Kazuyoshi, Kato Koichi*	
16.15-17.00	*Coffee break*			
	ROOM 01 - Advances in Robotic Actuation and Motion Optimization *Chairpersons:*	**ROOM 02 - Green Aware AI within the PNRR FAIR project** *Chairpersons:*	**ROOM 03 - Energy Efficiency and Sustainability in Systems** *Chairpersons:*	
17.00-17.15	Protection of insulating paper strip during forming and assembly of Hairpin motors: some preliminary modelling and comparisons between different solutions *Authors:* **Luca Pugi** *, Andrea Nocentini, lorenzo berzi, daniele nocciolini, Massimo Becheri, Rubino Corbinelli, Niccolò Baldanzini*	Development of an Object Detection Algorithm Based on Trained Models Integration: A Tomato Detection Case *Authors:* **Dmitry Malyshev** *, Carbone Giuseppe, Angad Singh Gurtatta*	Evaluating the feasibility of estimating rail longitudinal level through double integration of vertical contact forces *Authors: Giovanni Bellacci, Mani Entezami, Paul Weston, Niccolò Baldanzini,* **Luca Pugi**	
17.15-17.30	Closed-loop Pressure Control of a Soft Pneumatic Actuator by a 3/2 Solenoid Digital Valve *Authors: Nicola Stampone,* **Michele Gabrio Antonelli** *, Pierluigi Beomonte Zobel*	Analysing the Integration of Artificial Intelligence into Rehabilitation Ankle Joint Exoskeletons *Authors:* **Nursultan Zhetenbayev** *, Arman Uzbekbayev , Aidos Sultan , Gani Sergazin, Abu Alim Ayazbay*	Development and Validation of a Design Method for Energy-Efficient Cam Mechanisms *Authors: Thomas Knobloch, Fabian Loba, Mathias Hüsing,* **Burkhard Corves**	
17.30-17.45	Leveraging kinematic redundancy for energy efficiency in a 8-DOF robotic system *Authors:* **Giuliano Fabris** *, Lorenzo Scalera, Alessandro Gasparetto*	Enhancing Robotics Education with Reinforcement Learning in Task Planning *Authors: Elena Caselli, Michele Polito, Valerio Cornagliotto, Elisa Digo, Laura Gastaldi, Stefano Pastorelli*	Operating range formulation of regenerative clutches for Human-Powered Robotic Vehicles *Authors:* **Yusuke Sugahara** *, Kento Maeda*	
17.45-18.00	Concept for a Digital Tool Chain for lightweight-optimised design of high-speed planar mechanisms *Authors:* **Burkhard Corves** *, Mathias Hüsing, Kai-Uwe Schröder, Nils Brückmann, Raphael Cleven*	Data Preprocessing for Cultural Competent Machine Learning in Social Robotics *Authors: Enzo Ubaldo Petrocco, Antonio Sgorbissa, Luca Oneto*	Energy expenditure comparison of planar parallel robotic manipulators for pick-and-place operations *Authors: Chiara Nezzi, Veit Gufler, Anna Berger, renato vidoni*	
18.00-18.15	Energy-optimal motion planning with robust residual oscillation suppression on a translating flexible beam *Authors:* **Paolo Boscariol** *, Dario Richiedei, Alberto Trevisani*	Justifying black-box model decisions through generative-models-enhanced explanations *Authors: Fabrizio Angiulli, Fabio Fassetti, Simona Nisticò*	Motion Optimization in Sliding Actuators *Authors:* **Christian Schioppetto** *, Jacopo Belotti, Cinzia Amici, Roberto Pagani, Carlo Remino, Rodolfo Faglia*	
18.15-18.30	Development of a robotic hand with soft sensors and actuators *Authors:* **Dorin Copaci** *, Paula Canora, Dolores Blanco, Luis Enrique Moreno Lorente*	Reservoir computing using spintronic diodes with mechanical coupling (abstract) *Authors: Andrea Grimaldi, Davi R. Rodrigues, Andrea Meo,* **Giovanni Finocchio** *, Francesca Garesci*	Improving Environmental Perception during Underwater Manipulation through Stereo Vision and Acoustic Imaging: a Simulation-Based Approach *Authors: Michele Calabria, Vincenzo Rino, Luigi Scarfone, Antonio Lagudi, Loris Barbieri, Fabio Bruno*	
18.30-18.45	Fractional-order L1 adaptive controller with model-based feed-forward for VELOCE Parallel Manipulator *Authors: Bouchra Khoumeri, Samir Ladaci,* **Carbone Giuseppe**	Detecting and fixing anomalies in neuro-symbolic planning systems: a theoretical framework *Authors:* **Luca Ferragina** *, Simona Nisticò, Luigi Palopoli*	Simulative Investigation of Uneven Rotor Surfaces on the Drop-Down Behavior in Planetary Touch-Down Bearings *Authors: Benedikt Schüßler, Karl Scholl, Stephan Rinderknecht*	
19.30-22.00	*Gala Dinner and Award Ceremony*			

Thursday 12th

	ROOM 01 - Assistive and Collaborative Robotics - Session 1	ROOM 02 - Human Assistance and Medical Robotics	ROOM R3B - Abstract - Session 1	
	Chairpersons:	*Chairpersons:*	*Chairpersons:*	
9.00-9.15	Method for Optimizing the Structure and Parameters of Mobile Robots in a Group for Joint Solution of Agricultural Problems *Authors: Larisa Rybak,* **Dmitry Malyshev** *, Vladislav Cherkasov, Dmitry Dyakonov*	Engineering an Active Ankle-Foot Prosthesis: Conceptual Design for Enhanced Walking Dynamic *Authors:* **Nursultan Zhetenbayev** *, Sayat Akhmejanov , Aidos Sultan , Kassymbek Ozhikenov , Yerkebulan Nurgizat, Gani Sergazin*	Portable STS Navigating System based on Practical Human Motion Data Analysis Model *Authors: Shenghao Yin, Keisuke Osawa, Kei Nakagawa, Eiichiro Tanaka*	9.00-9.10
9.15-9.30	A navigation approach for autonomous mobile robots in sustainable agriculture *Authors: Diego Tiozzo Fasiolo, Lorenzo Scalera, Eleonora Maset, Baptiste Lesquerré-Caudebez, Andrea Fusiello, Alberto Beinat,* **Alessandro Gasparetto**	Design of a novel robotic instrument used for minimally invasive esophagectomy *Authors:* **Bogdan Gherman** *, Andrei Cailean, David Eles, Paul Tucan, Daniela Jucan, Alexandru-Vasile Pusca, Calin Vaida, Doina Pisla*	Brain reactivity to peripheral nerve stimulation during motor tasks with and without lower limb exoskeleton: a neurophysiological marker of human-robot embodiement *Authors: Margherita Bertuccelli, Stefano Tortora, Edoardo Trombin, Mariasole Pasinato, William Tasinazzo, Emanuele Menegatti, Giovanni Sparacino, Alessandra Del Felice*	9.10-9.20
9.30-9.45	Design of a new elbow-wrist assisting device *Authors: Earnest Ofonaike, Marco Ceccarelli, Cuauhtémoc Morales-Cruz*	A Hands-On Platform for Learning Human-Robot Collaboration Using Gesture-Controlled Robotics *Authors: Francesco Crivellari, Valerio Cornagliotto, Michele Polito, Stefano Pastorelli*	Portable STS Navigating System based on Practical Human Motion Data Analysis Model *Authors: Shenghao Yin, Keisuke Osawa, Kei Nakagawa, Eiichiro Tanaka*	9.20-9.30
9.45-10.00	Effect of single-sided robotic leg support in the stand-to-sit motion of individuals with asymmetric leg strength *Authors: Micah Jibril Alampay, Ming Jiang, Yukio Takeda*	Prioritized Task Transition in Physical Interaction with Mobile Manipulators *Authors: Francesco Grella, Giorgio Cannata, Pedro Figueroa Saire*	IF the Cobots need to replace Humans *Authors: Vittoria Scalise, Adrian Pisla, Frank Andreas Schittenhelm, Sueleyman Torasan*	9.30-9.40
10.00-10.15	Development of a Bearing Hub Unit Having Force Sensor Functionality for Assistive Robot Systems *Authors: Daisuke Matsuura, Yudai Baba, Tsune Kobayashi*	A tele-operated architecture based on a parallel position/velocity control for robot-aided percutaneous surgery *Authors: Clemente Lauretti, Rosaura Morfino, Francesco Cocco, Loredana Zollo*	Enhanced High-Stability Target Detection Vision Network Utilizing 2D-3D Mapping for UAV Applications *Authors: Jialu Bao,* **Huang Gao** *, Marco Ceccarelli*	9.40-9.50
			Revolutionizing Agrifood Training: The MetaLAM Vir-tual Laboratory for Multielement Analysis *Authors: Francesco Bonavolontà, Edvige Gambino, Maria Teresa Verde, Leopoldo Angrisani, Diana Agrelli, Carmine Amalfitano, Elisabetta Pignoli, Antonio Monaco, Paola Adamo*	9.50-10.00
10.15-11.00	*Coffee break*			
	ROOM 01 - Assistive and Collaborative Robotics - Session 2	ROOM 02 - PNRR Age-It: Ageing Well in an Ageing Society (Invited Truck)	ROOM R3B - Abstract - Session 2	
	Chairpersons:	*Chairpersons:*	*Chairpersons:*	
11.00-11.15	Development of a Cooperative Learning-Based Operation System for Estimating Operator Intent and Enhancing Hands-Free Mobility *Authors: Yoshito Kamon, Misato Nihei,* **Yusuke Sugahara** *, Chao Lyu, Yuri Nishiwaki, Takazumi Ono*	Development of a Robotic Harvesting Device for Tomatoes Based On a Palm Gripper *Authors:* **Dmitry Malyshev** *, Carbone Giuseppe, Issam Bakki*	Digital Approach in Robotic Assisted Rehabilitation *Authors: Adrian Pisla, David Mihai LUPU, Vlad-Sebastian ANGHELUTA, SILVIA-DANIELA POHRIB, Mihai CIUPE*	11.00-11.10
11.15-11.30	Robotically Assisted Biopsychosocial Performance Enhancement of Paralympic Athletes *Authors: Adrian Pisla, Danut Ilie Popa, David Mihai Lupu, Laura Roxana Bodea, Ioana Rada Popa Ilie*	Model Parameters Estimation of a Robotic Device for Upper Limb Neuromotor Rehabilitation *Authors: Mario Visconte, Francesca Alvaro, Rocco Adduci, Michele Perrelli, Domenico Mundo*	Using AVL EXCITE™ as educational platform to study dynamics and vibrations of engines and powertrains *Authors:* **Tigran Parikyan**	11.10-11.20
11.30-11.45	Cobot Technology for Emergencies Approach *Authors: Adrian Pisla, Laura Roxana Bodea, Alina-Beatrice Oltean, Bogdan Vartolomei, Eugen-Dănuţ Mariş*	InteLLExo: an open framework for boosting the development of intelligent exoskeletons *Authors: Francesco Bettella, Stefano Tortora, Riccardo Novello, Edoardo Trombin, Luigi Alberti, Emanuele Menegatti, Nicola Petrone,* **Alessandra Del Felice**	Computational Studies of Nonlinear Dynamics in Aero-Engine *Authors: Jasnoor Singh, Rajendra Kumar Munian, Srikant Sekhar Padhee*	11.20-11.30
11.45-12.00	From Vision to Grasp: Agricultural product recognition and manipulation trough TCP Dynamic Realignment *Authors:* **Nader Al Khatib** *, Daniele Cafolla*	Conceptual and Functional Design of a New Sustainable Cable-Driven Hip Exoskeleton *Authors: Giovanni Gerardo Muscolo, Michele Conconi, Lorenzo Chiari,* **Alessandra Del Felice** *, Nicola Sancisi*	Feedback Linearization-Based Control of Lower Limb Exoskeleton Using Hybrid GA-PSO Technique *Authors: S. Anup Chander, M.P.S. Shyam Sundar, Anant Tomar, Ravjeet Singh, V. D Shivling , ashish singla*	11.30-11.40
12.00-12.15	Study of contact deformations in human and robotic fingertips for haptic applications *Authors:* **Silvia Logozzo** *, Monica Malvezzi, Maria Cristina Valigi*	Development of a dynamic fixing system for wearable robotics *Authors: Michele Perrell i,* **Simone Leone** *, Carbone Giuseppe*	Data Driven Conceptual Design of Reconfigurable Robot for Non-surgical Medical Assistance *Authors: Shreyas Maheshkumar Patel, ASHISH KUMAR ROUT, Dr. Ekta Singla, ashish singla*	11.40-11.50
				11.50-12.00
13.00-14.30	*Closing Ceremony*			
	Bold refer to the indicated speaker			