

Wednesday 11th

09.00-09.45	<i>Opening ceremony and plenary lecture 1 (Room R3)</i>		
09.45-10.15	<i>Plenary lecture 1: Breaking Barriers: The Rise of a New Generation of Advanced Robotics, Alessandro Piscioneri Head of Products & Solutions Management at Comau (Room R3)</i>		
10.15-10.45	<i>Coffee break</i>		
	ROOM R3 - Robotics and Mechatronics - Session 1 <i>Chairpersons: Marco Ceccarelli, Maria Cristina Valigi</i>	ROOM R1B - Dynamics of Machinery, Rotordynamics, Multibody Dynamics, Computational Kinematics - Session 1 <i>Chairpersons: Giovanni Boschetti, Domenico Mundo</i>	ROOM R3B - Sustainable Developmen Goals <i>Chairpersons: Paolo Boscariol, Lorenzo Scalera</i>
10.45-11.00	Experimental performance characterization of Torveastro limb <i>Authors: Kayitare Ida Shine, Marco Ceccarelli</i>	Kinematic calibration of robots using a single draw-wire encoder: a comparison <i>Authors: Giovanni Boschetti, Teresa Sinico</i>	Problems and requirements for the robotic disassembly of lithium-ion batteries in the automotive industry <i>Authors: Luca Quattrucci, Marco Ceccarelli, Marco Santoro, Matteo Russo</i>
11.00-11.15	The cooperating robotics in applications <i>Authors: Jaroslav Antoš, Martin Bušek</i>	Evaluation of human body kinematics while riding electric kick scooter <i>Authors: Angelo Domenico Vella, Elisa Digo, Laura Gastaldi, Stefano Pastorelli, Alessandro Vigliani</i>	Preliminary model of the energy consumption of an independent cart conveyor system <i>Authors: Paolo Boscariol, Dario Richiede, Iacopo Tamellin, Alberto Trevisani</i>
11.15-11.30	A monolithic tendon-driven continuum robot design for easy 3D printing and assembly <i>Authors: Nicola Perugini, Matteo Russo</i>	Development of a multibody-based dynamic model of the rear hitch subsystem of an agricultural tractor <i>Authors: Arka Roychoudhury, Alberto Martini</i>	Online optimization and trajectory planning for energy efficiency in a robotic linear axis <i>Authors: Giuliano Fabris, Lorenzo Scalera, Alessandro Gasparetto</i>
11.30-11.45	Collaborative robot for contouring machining of 3D-printed components <i>Authors: Michele Gabrio Antonelli, Jacopo Brunelli, Walter D'Ambrogio, Enrico Mattei, Nicola Stampone</i>	Self-Calibration Method Using Tension Sensors for a Vertical Planar Cable-Driven Parallel Robot <i>Authors: Liu Yifan, Tochigi Wataru, Yusuke Sugahara, Yukio Takeda, Mizutani Ryo, Katamura Ryuta, Yanagita Katsumi</i>	Modelling and Control of a Fuel Cell and Battery Electric Vehicle for Energy Optimization <i>Authors: Giovanni Inverti, Henrique de Carvalho Pinheiro, Massimiliana Carello</i>
11.45-12.00	Differentially flat robots with compliance in actuated joints <i>Authors: Michele Tonan, Alberto Doria, Matteo Bottin, Giulio Rosati</i>	Dynamic analysis of a quay crane using lumped parameter models <i>Authors: Ivan Tomasi, Carlo Remino, Giovanni Incerti, Luigi Solazzi, Riccardo Adamini</i>	Performance and Efficiency Study of a Hybrid Self-Propelled Cable Logging Carriage – Preliminary Results <i>Authors: Stefan Leitner, Renato Vidoni</i>
12.00-12.15	Joint path planning of the quasi-Spherical Parallel Manipulator <i>Authors: Daniel Pacheco Quinones, Daniela Maffiodo, Med Amine Laribi</i>	Dynamic Error analysis for linear-elasticity FE problems <i>Authors: Anna Karpik, Francesco Cosco, Francesca Alvaro, Domenico Mundo</i>	Experimental techniques for flywheel energy storage system self-discharge characterisation <i>Authors: Simone Venturini, Salvatore Paolo Cavallaro, Alessandro Vigliani</i>
12.15-13.30	<i>Lunch buffet</i>		
	ROOM R3 - Robotics and Mechatronics - Session 2 <i>Chairpersons: Giuseppe Carbone, Luigi Tagliavini</i>	ROOM R1B - Mechanism Design - Session 1 <i>Chairpersons: Nobuyuki Iwatsuki, Fedrico Colombo</i>	ROOM R3B - Biomechanical Engineering- Session 1 <i>Chairpersons: Ming Jiang, Luca Carbonari</i>
13.30-13.45	Static and dynamic identification of the Mitsubishi RV-5AS-D-S01 robot <i>Authors: Domenico Dona', Paolo Boscariol, Matteo Bottin, Basilio Lenzo, Giulio Rosati</i>	Conical Polygon Connection in Design of Indexing Gearboxes with Radial Cams <i>Authors: Jiří Ondrášek</i>	Study Concerning Design and Optimization of a Multifunction Actuation Group for an Industrial Exoskeleton <i>Authors: Trenziano Raparelli, Luigi Mazza, Gabriella Eula</i>
13.45-14.00	Human-Machine Driving Interface for Omnidirectional Robots and Wheelchairs <i>Authors: Luigi Tagliavini, Andrea Botta, Giovanni Colucci, Lorenzo Baglieri, Simone Duretto, Giuseppe Quaglia</i>	Novel Iterative Methodology for Modifications in Planar Straight Line Crank-Rocker Synthesis <i>Authors: Yeshwant M. Sonkhaskar, Prashant B. Shiwalkar, Dinesh R. Zanwar, Erik Macho, Victor Petuya</i>	Finite element model updating applied to a lower limb prosthesis through the optimisation of the mechanical properties <i>Authors: Claudia Barattini, Luca Dimauro, Angelo Domenico Vella, Alessandro Vigliani</i>
14.00-14.15	Dynamic obstacle avoidance for non-holonomic mobile robots with differential wheels <i>Authors: Federico Neri, Giacomo Palmieri, Daniele Costa, Massimo Callegari</i>	Design of a Constant-Torque Compliant Joint based on Curved Beam Elements <i>Authors: Simone Serafino, Luca Bruzzone, Oliviero Giannini, Matteo Verotti</i>	An Interactive Combined Mechatronic Approach to Enhance Upper Limb Rehabilitation <i>Authors: Simone Leone, Med Amine Laribi, Eduardo Castillo-Castañeda, Giuseppe Carbone</i>
14.15-14.30	Conceptual Design of Hybrid Thrustered Cable-Suspended Parallel Robots <i>Authors: Yifan Feng, Yusuke Sugahara, Ming Jang, Marco Ceccarelli, Yukio Takeda</i>	Stress analysis of the hybrid 'steel-composite' disc in a carousel body of an indexing gearbox turret follower <i>Authors: Radek Zbončák, Jiří Ondrášek</i>	Application of a multibody approach for the Digital Twinning of the human-robot ecosystem in upper limb rehabilitation <i>Authors: Francesca Alvaro, Rocco Adduci, Michele Perelli, Francesco Tedesco, Domenico Mundo</i>
13.30-14.45	Vision systems and IMU signals to design a hand-free driving HMI <i>Authors: Lorenzo Baglieri, Daisuke Matsuura, Tsune Kobayashi, Giuseppe Quaglia</i>	Machine Learning Algorithm for identifying longer straight-line crank rocker coupler curves <i>Authors: Mohan R. Nagrurkar, Yeshwant M. Sonkhaskar, Prashant B. Shiwalkar</i>	Effect of joint misalignment in upper limb exoskeleton based on McKibben muscles <i>Authors: Maria Paterna, Carlo De Benedictis, Carlo Ferraresi</i>
14.45-15.00	AGRIMARO.Q, A Service Robot for Precision Agriculture in Greenhouses <i>Authors: Giovanni Colucci, Andrea Botta, Luigi Tagliavini, Lorenzo Baglieri, Simone Duretto, Giuseppe Quaglia</i>	Statics Analysis of Overconstrained Link Mechanisms with Structural Error <i>Authors: Daichi Habara, Nobuyuki Iwatsuki, Kotaro Hoshiba</i>	Estimating the Position of Surgical Needle Tips Hidden in Organs Using Generative Adversarial Networks <i>Authors: Shoko Memida, Satoshi Miura</i>
15.00-15.45	<i>Coffee break</i>		
	ROOM R3 - Tribology, Gearing and Transmissions <i>Chairpersons: Enrico Ciulli, Andrea Trivella</i>	ROOM R1B	ROOM R3B - Biomechanical Engineering - Session 2 <i>Chairpersons: Med Amine Laribi, Carlo De Benedictis</i>
15.45-16.00	Measuring the wear volume of cylindrical bushings with a roundness measuring instrument <i>Authors: Edoardo Goti, Andrea Manuello Bertetto, Luigi Mazza</i>		Robot-Assisted Rehabilitation: mechatronic redesign of a finger exoskeleton to improve its motion tracking capabilities <i>Authors: Alessia Di Natale, Lorenzo Bartalucci, Nicola Secciani, Gherardo Liverani, Alessandro Ridolfi, Benetto Allotta</i>
16.00-16.15	A Hybrid Identification Procedure for Grooved Aerostatic Pads <i>Authors: Giacomo Bencivenga, Fedrico Colombo, Luigi Lentini, Trenziano Raparelli, Andrea Trivella</i>		Upper Limbs Industrial Exoskeletons: an Objective and Subjective Evaluation Method <i>Authors: Serenella Terlizzi, Samuele Tonelli, Cecilia Scoccia, Daniele Costa, Giacomo Palmieri</i>
16.15-16.30	A statistical method to compute the dynamic coefficients of a tilting pad journal bearing <i>Authors: Michele Barsanti, Enrico Ciulli</i>		Design and Preliminary Testing of WELiBot: A Wearable End-Effector Type Upper Limb Assistive Robot <i>Authors: Ryohei Morita, Ming Jiang, Andrea Botta, Yusuke Sugahara, Giuseppe Quaglia, Marco Ceccarelli, Yukio Takeda</i>
16.30-16.45	Testing of different porous graphite for air bearings <i>Authors: Fedrico Colombo, Luigi Lentini, Trenziano Raparelli, Andrea Trivella</i>		Compact Series Elastic Actuator for a Wrist Exoskeleton for Daily Living Assistance <i>Authors: Andrea Botta, Luigi Tagliavini, Giovanni Colucci, Lorenzo Baglieri, Simone Duretto, Yukio Takeda, Giuseppe Quaglia</i>
16.45-17.00	Spiral groove thrust bearing modeling with finite difference method <i>Authors: Fedrico Colombo, Edoardo Goti, Luigi Lentini</i>		Ability Mining of Toe Manipulation Under Force Against Toe Flexion <i>Authors: Masaharu Komori, Toshiki Watanabe, Tasturo Terakawa</i>
19.00-	<i>Welcome cocktail</i>		

Thursday 12th

09.00-09.30	<i>Plenary lecture 2: Kinematic analysis and motion control of underactuated mechanisms constrained with elastic elements and their application to flexible mechanisms, Nobuyuki Iwatsuki, Tokyo Institute of Technology (Room R3)</i>		
	ROOM R3 - History and Education <i>Chairpersons: Marco Cocconcelli, Carmen Visconte</i>	ROOM R1B - Vibration - Session 1 <i>Chairpersons: Sergio Savino, Ciro Tordela</i>	ROOM R3B - Advances in Vehicle Dynamics and Wheel Contact Mechanics (Special Session) - Session 1 <i>Chairpersons: Flavio Farroni, Guido Napolitano Dell'Annuziata</i>
09.30-09.45	Low cost space shuttle simulator supported by air bearings <i>Authors: Daniela Maffiodo, Giorgio Mang, Terenziano Raparelli</i>	Study on Variable PWM Control of Electric Vehicle Motor <i>Authors: Haruki Oota, Tomoyuki Miyashita</i>	A Method for Tire Damping Evaluation based on a Free Fall Test and Image Processing <i>Authors: Raffaele Stefanelli, Carlotta De Giuli, Gianluca Pagano, Gerladino Mandragora, Guido Napolitano Dell'Annuziata</i>
09.45-10.00	The Future of E-Mobility: an innovative course to approach Big Global Challenges <i>Authors: Henrique de Carvalho Pinheiro, Massimiliana Carello</i>	Study on Fatigue Life Design Method for Solder Joints of Electronic Components on Spacecraft under Random Vibration <i>Authors: Koudai Goto, Hakio Yasukawa, Tomoyuki Miyashita</i>	A preliminary conceptualization of an observer based on a sliding-mode approach for vehicle condition monitoring without tire-specific modelling <i>Authors: Raffaele Marotta, Salvatore Strano, Mario Terzo, Ciro Tordela</i>
10.00-10.15	Italian IFToMMist distinguished figures in MMS: an illustrated survey <i>Authors: Marco Ceccarelli</i>	Vibro-acoustic analysis of an electric powertrain: an evaluation of the relative contribution of gear whine noise and electromagnetic excitations on the overall response <i>Authors: Giorgio De Donno, Luca Ciravegna, Enrico Galvagno, Simone Ferrari, Gianmarco Pellegrino, Matteo Iannone</i>	Hybrid physics-based and data-driven modelling for vehicle dynamics simulation <i>Authors: Giuseppe Valente, Michele Perrelli, Rocco Adduci, Francesco Cosco, Roberto Bossio, Domenico Mundo</i>
10.15-10.30	Educational Resources for Teaching and Learning Robotics: Accessible Lectures and Toolboxes <i>Authors: Maria Pozzi, Domenico Praticchizzo, Monica Malvezzi</i>	A system identification approach for nondestructive characterization of sport surfaces <i>Authors: Andrea Genovese, Ciro Tordela</i>	Tire Viscoelasticity Characterization for Adhesion Phenomena Analysis by Using the VESevo Innovative Technology <i>Authors: Raffaele Stefanelli, Raffaele Suero, Marco Aprea, Francesco Tinpone, Flavio Farroni</i>
10.30-11.15	<i>Coffee break</i>		
	ROOM R3 - Mechanism Design - Session 2 <i>Chairpersons: Alessandro Gasparetto, Victor Petuya</i>	ROOM R1B - Vibration - Session 2 <i>Chairpersons: Paolo Boscaroli, Luca Bruzzone</i>	ROOM R3B - Advances in Vehicle Dynamics and Wheel Contact Mechanics (Special Session) - Session 2 <i>Chairpersons: Flavio Ferroni, Guido Napolitano Dell'Annuziata</i>
11.15-11.30	Irregular-shaped Torsion Spring Design for Gravity Compensation Mechanism Using Chain Algorithm and DIRECT Optimization <i>Authors: Zexin Shan, Mitsuru Endo, Hiroshi Nakamura, Yukio TsuTsu</i>	Dynamics of Railway Infrastructures <i>Authors: Massimo Cavacece, Giorgio Filgiolini, Chiara Lanni</i>	Comparison of model-based techniques for vehicle sideslip angle estimation <i>Authors: Lorenzo Ponticelli, Mario Barbaro, Gerladino Mandragora, Andrea Stefanelli, Gonçalo Sousa Torres</i>
11.30-11.45	Generation of alternative motion with adjustable stroke by deformation of an elastic ring <i>Authors: Christian Schioppetto, Torberto Bussola, Matteo Monfrini, Rodolfo Faglia, Carlo Remino</i>	Simulating Crowd Vibration with Traffic Load <i>Authors: Massimo Cavacece, Giorgio Filgiolini, Chiara Lanni</i>	Influence of thermodynamic on ECS control in DLC maneuver <i>Authors: Andrea Stefanelli, Fabio Carbone, Pietro Caresia, Federico Di Stasio, Gianluca Pagano, Lorenzo Ponticelli, Aleksandr Sakhnevych</i>
11.45-12.00	Synthesis of Chebyshev four-bar linkages and analysis of their motion properties via the centrodes <i>Authors: Giorgio Filgiolini, Chiara Lanni, Luciano Tomassi</i>	Condition monitoring of gears via time-frequency techniques <i>Authors: Vincenzo Niola, Francesco Melluso, Mario Spirito</i>	Investigation on the potential of open source models for the evaluation of tire contact patch <i>Authors: Fabio Romagnuolo, Raffaele Maglione, Gerladino Mandragora, Giovanni Narducci, Gonçalo Sousa Torres</i>
12.00-12.15	Design and modeling of a dosing unit in a capsule-filling machine <i>Authors: Filippo Magri, Giuseppe Sciarra, Giovanni Mottola, Gabriele Lelli, Marco Carricato</i>	A comparison between different hybrid electric propulsion system configurations by means of vibrational analysis and fuel consumption <i>Authors: Vincenzo Niola, Enrico Fornaro, Mario Spirito, Pierangelo Malfi, Francesco Melluso</i>	Design of a fully electric scaled vehicle model with 4 independent motors <i>Authors: Mario Costantini, Mariagrazia Tristano, Riccardo De Castro, Matteo Massaro, Roberto Lot, Ludovico Ortombina, Basilio Lenzo</i>
12.15-12.30	Synthesis of Oldham mechanisms for three-finitely separated positions <i>Authors: Giorgio Filgiolini, Chiara Lanni, Luciano Tomassi</i>		A feasibility analysis of a six-wheel drive rover for bush clearing operations <i>Authors: Giandomenico Di Massa, Stefano Pagano, Ernesto Rocca, Sergio Savino</i>
12.30-14.00	<i>Lunch buffet</i>		
13.30-14.00	IFToMM Italy Meeting (Room R3)		
	ROOM R3 -Robotics and Mechatronics - Session 3 <i>Chairpersons: Daisuke Matsuura, Stefano Pastorelli</i>	ROOM R1B - Dynamics of Machinery, Rotordynamics, Multibody Dynamics, Computational Kinematics - Session 2 <i>Chairpersons: Giorgio Filgiolini, Simone Venturini</i>	ROOM R3B - Biomechanical Engineering - Session 3 <i>Chairpersons: Laura Gastaldi, Andrea Botta</i>
14.00-14.15	Exploiting the redundancy of cable suspended parallel robots for the actuation of the end-effector <i>Authors: Giovanni Boschetti, Riccardo Minto</i>	Torque and angular velocity estimation of an electric machine through Neural Networks based approach <i>Authors: Mario Spirito, Francesco Melluso, Armando Nicoletta, Enrico Fornaro</i>	A feasibility study for a cable driven parallel robot for integrated wrist and fingers rehabilitation <i>Authors: Vincenzo Pugliese, William Sciocchetti, Mario De Nisi, Giuseppe Abramo, Francesco Lago, Elio Matteo Curcio, Giuseppe Carbone</i>
14.15-14.30	A vision-controlled robotic system for precision agriculture and its application to an artificial vineyard <i>Authors: Simone Gabrin, Andrea Gagliardo, Michael Terzer, Marco Todescato, Domink Mat, Andrea Giusti</i>	Evaluation of the maneuvering assistance effectiveness of two wheelchair powered assistance devices <i>Authors: Valerio Cornagliotto, Michele Polito, Stefano Pastorelli, Laura Gastaldi</i>	A 3D Printed Wearable Glove with Inflatable Chambers <i>Authors: Mohammad Jabari, Giovanni Colucci, Simone Duretto, Carmen Visconte, Giuseppe Quaglia</i>
14.30-14.45	Animating Realism: Mechatronic Emulation of Human Movement for Advanced Animatronics <i>Authors: Matteo Monfrini, Ivan Tomasi, Roberto Pagani, Rodolfo Faglia, Luigi Solazzi, Christian Schioppetto</i>	Nonlinear Dynamics of Spiral Bevel Gear: axial bearing stiffness effect <i>Authors: Farhad S. Samani, Moslem Molaie Emamzadeh, Shakiba Rakhshani, Milad Asadi, Antonio Zippo, Giovanni Iarriccio, Francesco Pellicano</i>	Analysis of bend-over gesture wearing a trunk-support exoskeleton <i>Authors: Mattia Antonelli, Michele Polito, Stefano Pastorelli, Laura Gastaldi</i>
14.45-15.00	Neural Network Task Time Mapping of a 3-DOF Clavel's Delta Robot <i>Authors: Paolo Righettini, Roberto Strada, Filippo Cortinovis</i>	Characterization of a rotor test rig with tilting pad journal bearings for high peripheral speed <i>Authors: Guglielmo Giannetti, Enrico Meli, Andrea Rindi</i>	Anthropomorphic neck for a crash dummy <i>Authors: Jose Antonio Pérez-Valdez, Christopher René Torres-San Miguel, Jose L. Rueda-Arreguin, Marco Ceccarelli</i>
15.00-15.15	Experimental evaluation of centralized control strategies on a 5R robot <i>Authors: Paolo Righettini, Roberto Strada, Filippo Cortinovis</i>	The centrodes relevance for the kineto-dynamic analysis of the parabolic rigid-body motion <i>Authors: Giorgio Figlioli, Chiara Lanni, Luciano Tommassi, Massimo Cavacece</i>	eXoft, Innovative Soft-Rigid Exoskeleton for Smart Factory <i>Authors: Luca Carbonari, Ilaria Palomba, Massimiliano Solazzi, Carmen Visconte</i>
15.30 -	<i>Transfer to Fontanafredda: Social Program, Gala Dinner, and Award Ceremony</i>		

Friday 13th

	ROOM R3 - Diagnostics and Experimental Characterization of Machines (Special Session) <i>Chairpersons: Alessandro Paolo Daga, Gianluca D'Elia</i>	ROOM R1B - Mechatronics for Healthcare and Biomedical Applications (Special Session) <i>Chairpersons: Cinzia Amici, Monica Malvezzi</i>	ROOM R3B - Vehicle Dynamics and Control - Session 1 <i>Chairpersons: Masaharu Komori, Mauro Velardocchia</i>
9.00-9.15	Hydroelectric power generation unit coast-down data analysis for diagnostic purposes <i>Authors: Alessandro Paolo Daga, Bekhzod Abdullaev, Luigi Garibaldi, Damiano Cuvato, Manuel Bonjean, Antonino Sannolo, Lorenzo Artaz</i>	Evaluation of a simplified model for the estimation of consumption in small electrical VTOL UAVs <i>Authors: Matteo Saponi, Cinzia Amici, Alberto Borboni, Laura Testa, Stefano Cacciola, Rodolfo Faglia</i>	Test of iTPMS in ADAS System HIL Environment: a Methodological Framework for Wheels Speed Simulation <i>Authors: Donato Amoroso, Renato Brancati, Mario D'Agostino, Giancarlo Di Mare, Francesco Tufano</i>
9.15-9.30	Diagnostics of Wind Turbine by Detectivity <i>Authors: Marco Cocconcelli, Gianluca D'Elia, Matteo Strozzi, Riccardo Rubini</i>	Design Solutions of Healthcare Carts for Optimized Assisted Motion <i>Authors: Davide Consolati, Paolo Marmaglio, Raffaele Formicola, Roberto Rodella, Rodolfo Faglia, Monica Tiboni, Cinzia Amici</i>	Step-obstacle negotiation: a contact force analysis <i>Authors: Antonio Pappalettera, Rocco Galati, Giacomo Mantriota, Giulio Reina</i>
9.30-9.45	Condition Monitoring of Rolling Bearings for Automotive Water Pumps <i>Authors: Monica Tiboni, Massimo Antonini, Carlo Remino</i>	Home Pill Dispenser Operating Technologies: Automation Mechanisms Comparison <i>Authors: Paolo Marmaglio, Davide Consolati, Raffaele Formicola, Roberto Rodella, Rodolfo Faglia, Monica Tiboni</i>	A model-based parameter estimation algorithm for tire-soft soil contact model from off-road longitudinal tests <i>Authors: Angelo Domenico Vella, Luca Zerbato, Enrico Galvagno, Alessandro Vigliani, Silvio Data, Matteo Eugenio Sacchi</i>
9.45-10.00	Early Detection of Gearbox Failures in Wind Turbines Using Artificial Neural Networks and SCADA data <i>Authors: Bryan Puruncajas, Francesco Castellani, Yolanda Vidal, Christian Tutiven</i>	Handcycling Assessment through a Bench Simulator: Preliminary Analysis of IMUs Positioning on an Artificial Upper Limb Mechanism (AULM) <i>Authors: Michele Sanguinetta, Giovanni Incerti, Giovanni Legnani</i>	A simple railway traction simulator for comparing performances of metropolitan railway vehicles <i>Authors: Luca D'Acerno, Luca De Matteis, Raffaele Marotta</i>
10.00-10.15	Feasibility study for the development of a diagnostic and prognostic system on a high-speed rotating cutter <i>Authors: Luca Viale, Alessandro Paolo Daga, Luigi Garibaldi, Salvatore Caronia, Ilaria Ronchi</i>	Proposal and modeling by Simscape Multibody of a mechatronic device for breast cancer cells experiments <i>Authors: Sebastiano Angelella, Elisabetta Albi, Marco Dionigi, Silvia Logozzo, Maria Cristina Valigi</i>	Neural Network-Based Virtual Measurement of Road Vehicle Wheel Displacements <i>Authors: Raffaele Marotta, Luca De Matteis</i>
10.15-10.30	Effectiveness of ML algorithms for prognostics of bearings in industry 4.0 <i>Authors: Luca Arpa, Mattia Battarra, Emiliano Mucchi</i>	EWA 2: a single size self-adapting exoskeleton without adjustment for the upper limb <i>Authors: Alberto Borboni, Antonio Arbore, Irraivan Elanvazuthi</i>	Estimating sideslip angle using a downward-facing camera <i>Authors: Leonardo Serena, Mattia Bruschetta, Riccardo de Castro, Basilio Lenzo</i>
10.30-10.45	Numerical and experimental vibration study of an axial piston pump with the focus on the hydraulic circuit layout <i>Authors: Ala Eddin Chakroun, Mattia Battarra, Emiliano Mucchi, Giorgio Dalpiaz</i>	Development of the modular finger elements of an actuated glove for hand rehabilitation <i>Authors: Mihai Dragusanu, Anjum Saeed, Nicolas Guinet, Danilo Troisi, Domenico Praticchizzo, Monica Malvezzi</i>	Assessment of track chain tensioning on the vertical dynamic behaviour of a high-speed tracked vehicle <i>Authors: Luca Dimauro, Simone Veneturini, Antonio Tota, Enrico Galvagno Mauro Velardocchia</i>
10.45-11.30	<i>Coffee break</i>		
	ROOM R3 - Soft Actuation and Soft Robotics (Special Session) <i>Chairpersons: Monica Tiboni, Giovanni Colucci</i>	ROOM R1B - Robotics and Mechatronics - Session 4 <i>Chairpersons: Yusuke Sugahara, Chiara Cosenza</i>	ROOM R3B - Vehicle Dynamics and Control - Session 2 <i>Chairpersons: Enrico Galvagno, Basilio Lenzo</i>
11.30-11.45	Identification of DOE-based Predictive Model for the Bending Behavior of a Soft Pneumatic Actuator <i>Authors: Nicola Stampone, Michele Gabrio Antonelli</i>	Hand-eye calibration using invariant calibrator placed to a robotic arm <i>Authors: Chiara Cosenza, Pierangelo Malfi, Armando Nicoletta, Vincenzo Niola, Sergio Savino</i>	Estimation of lateral wheel-rail contact forces and track irregularities through a nonlinear constrained estimator <i>Authors: Raffaele Marotta, Luca De Matteis</i>
11.45-12.00	PneuNets Soft Actuators: Characterization and Deformation Conditioning <i>Authors: Davide Loda, Monica Tiboni</i>	Demonstration of real-time event camera to collaborative robot communication <i>Authors: Laura Duarte, Michele Polito, Laura Gastaldi, Pedro Neto, Stefano Pastorelli</i>	Implementation of Lateral and Longitudinal Control in Nebrija Autonomous Vehicle <i>Authors: Francisco Badea Romero, Claudio Gragnaniello, Raffaele Marotta, Daniele Pascarella</i>
12.00-12.15	Design and characterization of a new soft robotic gripper <i>Authors: Virginia Burini, Silvia Logozzo, Maria Cristina Valigi</i>	Opening an industrial robot controller: advanced commercial robotics applications, rapid prototyping and fast research to industry technology transfer <i>Authors: Fabio Abbà, Damiano Morra, Valentina Ferrara, Alessandro Piscianeri, Giuseppe Parlato, Valerio Perna</i>	Porpoising effect on racecars: preliminary vehicle dynamics simulation <i>Authors: Matteo Caushi, Henrique de Carvalho Pinheiro, Elia Grano, Massimiliana Carello</i>
12.15-12.30	PAL-HAND.Q: a Handheld Device for Bidirectional and Multimodal Haptic Interaction <i>Authors: Simone Duretto, Giovanni Colucci, Mohammad Jabari, Giuseppe Quaglia</i>	A rapid initial-pose self-calibration method for underactuated cable-driven parallel robots <i>Authors: Filippo Zoffoli, Valerio Coccia, Edoardo Idà, Marco Caricato</i>	Analysis of engine braking system for heavy vehicle performance improvement <i>Authors: Cecilia Formento, Antonio Tota, Mauro Velardocchia</i>
12.30-12.45	A GRIPPER WITH WAVE JOINT FINGERS FOR PRECISION GRASPING <i>Authors: Silvia Logozzo, Maria Cristina Valigi</i>	Preliminary configuration of a robotic arm for pipeline maintenance in the DTT reactor <i>Authors: Giulia Calvo, Martina Ferrauto, Matteo Melchiorre, Andrea Reale, Davide Sorti, Mario Troise, Stefano Mauro</i>	Multibody Modeling for the analysis of the maneuverability of a Skid Steering 6-Wheeled Robot <i>Authors: Chiara Cosenza, Pierangelo Malfi, Armando Nicoletta, Vincenzo Niola, Sergio Savino</i>
12.45-13.00	Hybrid Soft-Rigid Robotic System for Hand Rehabilitation <i>Authors: Monica Tiboni, Davide Loda</i>	Impedance-Based Interaction Strategies for a Serial Collaborative Robot <i>Authors: Pietro Davide Maddio, Rosario Sinatra, Alessandro Cammarata</i>	Path planning and tracking algorithms for autonomous off-road vehicles <i>Authors: Gianluca Frison, Antonio Tota, Luca Dimauro, Mauro Velardocchia</i>
13.00-13.15	<i>Closing Ceremony (Room R3)</i>		