

PROGRAM IFIT 2022

7th September 2022, Wednesday

09:00	OPEN REGISTRATION		
09:00-10:00 Room 1	Opening Ceremony, Partnership IFToMM Italy - Japanese Council of IFToMM, 50th Anniversary IFToMM Italy Member Organization Ceremony		
10:00-10:30	WELCOME COFFEE BREAK		
10:30-11:30	Keynote Lecture		
11.30-13.10	MECHANISM DESIGN (5) Room 1	SUSTAINABLE DEVELOPMENT GOALS I (5) Room 2	DYNAMICS (total 4) Room 3
13:15	LUNCH		
14:30-15:50	HISTORY OF MECHANICS (4) Room 1	BIOMECHANICAL ENGINEERING I (4) Room 2	TRIBOLOGY (3), GEAR AND TRANSMISSION (1): (total 4) Room 3
15:50-16:20	COFFEE BREAK		
16:20-18:20	ROBOTICS I (6) Room 1	BIOMECHANICAL ENGINEERING II (6) Room 2	VEHICLE DYNAMICS AND CONTROL I (6) Room 3

8th September 2022, Thursday

09:00-11:00	MECHATRONICS (6) Room 1	COMPUTATIONAL KINEMATICS (6) Room 2	VEHICLE DYNAMICS AND CONTROL II (6) Room 3
11:00-11:30	COFFEE BREAK		
11:30-13:10	ROBOTICS II (5) Room 1	VIBRATIONS (5) Room 2	BIOMECHANICAL ENGINEERING III (5) Room 3
13:15	BUFFET LUNCH		
14:15-15:30	Meeting of IFToMM Italy (Room 1)		
16:00	Transfer from Piazzale Tecchio to Museo Ferroviario di Pietrarsa		
17:00	Guided Tour in Museo Ferroviario di Pietrarsa		
19:00	Transfer from Museo Ferroviario di Pietrarsa to Gala dinner restaurant		
20:00	Gala dinner and Awards Ceremony (Le Arcate Restaurant-via Aniello Falcone)		

9th September 2022, Friday

09:00-11:00	IFTToMM JAPAN (6) Room 1	ROBOTICS III (5) Room 2	VEHICLE DYNAMICS AND CONTROL (2) + VIBRATIONS (3)+MECHATRONICS(1) (total 6) Room 3
11:00-11:30	COFFEE BREAK		
11:30-13:00	ROBOTICS IV (3) + COMPUTATIONAL KINEMATICS (2) (total 5) Room 1	SUSTAINABLE DEVELOPMENT GOALS II (5) Room 2	

-Room 1: Aula Magna "L. Massimilla" 1st floor, University of Naples Federico II- Engineering Building at Piazzale Tecchio, 80.

-Room 2: Aula C, 2nd floor, University of Naples Federico II- Engineering Building at Piazzale Tecchio, 80.

-Room 3: Aula D, 2nd floor, University of Naples Federico II- Engineering Building at Piazzale Tecchio, 80.

-Conference Coffee Breaks and Lunchs will be at Biblioteca Storica, 2nd floor, University of Naples "Federico II"- Engineering Building at Piazzale Tecchio, 80.

Number of paper presentations per session in brackets.

DAY 1

Morning

Day 1 (7th September 2022, Wednesday):			Room 1
11.30 – 13.10 technical session: [5 papers x 20 min.] MECHANISM DESIGN			
Session Chairs: Marco Ceccarelli, Domenico Mundo			
5	Alexander Titov, Marco Ceccarelli	Problems and requirements for docking operation in orbital stations	Mechanism Design
22	Prashant Shiwalkar	Identification of Key Parameters for synthesis of Straight-line Crank Rockers using Inflection Circle Properties	Mechanism Design
39	Giulio Cipriani, Domenico Tommasino, Matteo Bottin, Alberto Doria, Giulio Rosati	Development of a hydraulic system for the mitigation of end-effector collisions	Mechanism Design
40	Fabio Caruso, Giacomo Mantriota, Giulio Reina	An analytical model for cantilever layer-jamming structures	Mechanism Design
46	Mohammed Khadem, Fouad Inel, Giuseppe Carbone	Design and Validation of a Novel Pyramidal CableDriven Robot	Mechanism Design

Day 1 (7th September 2022, Wednesday):			Room 2
11.30 – 13.10 technical session: [5 papers x 20 min.] SUSTAINABLE DEVELOPMENT GOALS I			
Session Chairs: Giuseppe Quaglia, Claudia Masselli			
19	Giovanni Imberti, Henrique de Carvalho Pinheiro, Massimiliana Carello	Regenerative Braking Effects on Non-Combustion Pollutant Release	Sustainable Development Goals

25	Adriana Greco, Luca Cirillo, Chiara Cosenza, Suxin Qian, Claudia Masselli	CHECK TEMPERATURE: Controlling the Heating of Electronic Circuits: a Key-approach Through Solid-state elastocaloric-effect based refrigerants	Sustainable Development Goals
34	Domenico Tommasino, Federico Moro, Enrique de Pablo Corona, Laura Vandì, Alessia Baietta, Alessandro Pracucci, Alberto Doria	Optimization of a piezoelectric wind-excited cantilever for energy harvesting from facades	Sustainable Development Goals
54	Paolo Iodice, Giuseppe Iangella, Amedeo Amoresano	Energy Performance and Fluid Leakage in Rotary Volumetric Machines at off-Design Operating Conditions	Sustainable Development Goals
65	Massimo Cardone, Enrico Fornaro, Salvatore Strano, Mario Terzo, Ciro Tordella	A Neural Network based approach for the intake air mass flow prediction in SI Engines	Sustainable Development Goals

Day 1 (7th September 2022, Wednesday):			Room 3
11.30 – 13.10 technical session: [4 papers x 20 min.] DYNAMICS			
Session Chairs: Sergio Savino, Andrea Genovese			
50	Tivadar Demjen, Erwin-Christian Lovasz, Maro Ceccarelli, Carmen Sticlaru, Antonio-Marius-Flavius Luputi	Analytical Synthesis of Optimized Five-Bar Linkage used for 3D Printer Structure	Dynamics of Machinery
11	Zharilkassin Iskakov, Nutpulla Jamalov, Azizbek Abduraimov	Non-stationary Resonance Transition of the Gyroscopic Rigid Rotor with Nonlinear Damping and Non-Ideal Energy Source	Rotor Dynamics
28	Andrea Grazioso, Rocco Galati, Giacomo Mantriota, Giulio Reina	Multibody simulation of a novel tracked robot with innovative passive suspension	Multibody Dynamics
58	Veit Gufler, Erich Wehrle, Renato Vidoni	Sensitivity analysis of flexible multibody dynamics with generalized- α time integration and Baumgarte stabilization	Multibody Dynamics

Afternoon I

Day 1 (7th September 2022, Wednesday):			Room 1
14:30-15:50 technical session: [4 papers x 20 min.] HISTORY OF MECHANICS			
Session Chairs: Alessandro Gasparetto, Vincenzo Niola			
No.	Title	Authors	
108	Marco Ceccarelli	A note on 50-year anniversary of IFToMM Italy	History of mechanism science
4	Marco Ceccarelli, Baichun Zhang	Contributions of Italian Jesuits in machinery technological transfer in China in 16-18 centuries	History of mechanism science

37	Paride Cavallone, Luigi Tagliavini, Andrea Botta, Giovanni Colucci, Lorenzo Baglieri, Giuseppe Quaglia	Evolution of Racing Wheelchair: from its origin to the Paralympic Games	History of Mechanism Science
42	Yibing Fang, Marco Ceccarelli, Yingjie Chu	Earliest locomotives in Italy and China from the perspective of technology transfer	History of mechanism science

Day 1 (7th September 2022, Wednesday):			Room 2
14:30-15:50 technical session: [4 papers x 20 min.] BIOMECHANICAL ENGINEERING I			
Session Chairs: Lorenzo Scalera, Edoardo Idà			
6	Jhon F. Rodriguez Leon, Eduardo Castillo-Castaneda, Giuseppe Carbone	A feasibility study of ExoPass, a passive magnetic-spring support exoskeleton to reduce worker's physical strain	Biomechanical Engineering
79	Elisa Panero, Dario Anastasio, Giuseppe Massazza, Laura Gastaldi	Fourier Analysis of Center of Mass Trajectory in Hemiparetic Gait	Biomechanical Engineering
84	Elisa Digo, Andrea Cereatti, Laura Gastaldi, Stefano Pastorelli, Marco Caruso	Modeling and kinematic optimization of the human upper limb for collaborative robotics	Biomechanical Engineering
90	Mattia Antonelli, Elisa Panero, Michele Polito, Laura Gastaldi, Stefano Pastorelli	Experimental Characterization of Active Joint for Trunk Exoskeleton	Biomechanical Engineering

Day 1 (7th September 2022, Wednesday):			Room 3
14:30-15:50 technical session: [4 papers x 20 min.] TRIBOLOGY, GEARING AND TRANSMISSION			
Session Chairs: Enrico Ciulli, Chiara Cosenza			
61	Sefa Furkan Küçükoğlu, Mehmet İsmet Can Dede, Marco Ceccarelli	Modeling a Magneto-Rheological Fluid-Based Brake via a Neural Network Method	Tribology
81	Eugeniu Grabovic, Enrico Ciulli, Alessio Artoni and Marco Gabiccini	A Model for the Prediction of Frictional Power Losses in Hypoid Gears	Tribology
95	Chiara Cosenza, Armando Nicoletta, Andrea Genovese, Vincenzo Niola, Sergio Savino, Mario Spirito	A vision based approach to study lubrication conditions in gearwheels	Tribology
74	Riccardo Russo, Ernesto Rocca	A vibro-impact analysis of a driveline equipped with a Dual Clutch Transmission system	Gear and Transmissions

Afternoon II

Day 1 (7th September 2022, Wednesday):			Room 1
16:20-18:20 technical session: [6 papers x 20 min.] ROBOTICS I			
Session Chairs: Alberto Doria, Daniele Cafolla			
12	Jorge Enrique Araque Isidro, Daniele Cafolla, Marco Ceccarelli	Problems and Requirements for Outer Space Astronaut Service Robot	Robotics
14	Paolo Boscariol, Lorenzo Scalera, Alessandro Gasparetto	Improving the efficiency of closed-chain robotic systems by the Trajectory Energy Index	Robotics
15	Daniele Cafolla, Betsy D.M. Chaparro-Rico	A Universal aided piloting system with NLU support	Robotics
17	Michele Tonan, Matteo Bottin, Alberto Doria, Giulio Rosati	A modal approach for the identification of joint and link compliance of an industrial manipulator	Robotics
18	Cecilia Scoccia, Giacomo Menchi, Marianna Ciccarelli, Matteo Forlini, Alessandra Papetti	Adaptive real-time gesture recognition in a dynamic scenario for human-robot collaborative applications	Robotics
27	Matteo Maggi, Giacomo Mantriota, Giulio Reina	Partial Contact Loss in Robotic Vacuum Grasping	Robotics

Day 1 (7th September 2022, Wednesday):			Room 2
16:20-18:20 technical session: [6 papers x 20 min.] BIOMECHANICAL ENGINEERING II			
Session Chairs: Giuseppe Carbone, Paolo Boscariol			
16	Rogério Sales Gonçalves, Marcus R. S. B. de Souza, Carbone Giuseppe, Marco Ceccarelli	Development of a Serious Game Using the Leap Motion Controller for Virtual Rehabilitation of a Human Upper Limbs	Biomechanical Engineering
24	Chiara Brogi, Alice Raggi, Nicola Secciani, Yary Volpe, Alessandro Ridolfi	A passive, customizable and kinetically-accurate hand replica for testing assistive and rehabilitative hand exoskeleton systems	Biomechanical Engineering
29	Luis Daniel Filomeno Amador, Eduardo Castillo-Castaneda, Giuseppe Carbone	A novel design for an upper-limb rehabilitation assisting device	Biomechanical Engineering
31	Elio Curcio, Mariagrazia Quacquarelli, L. Cariven, E. Pitti, Elena De Momi, Francesco Lago, Stefano Rodino', Carbone Giuseppe	Modelling and simulation of ADIUTOR upper limb rehabilitation robot	Biomechanical Engineering
51	Giorgia Chiriatti, Luca Carbonari, Daniele Costa, Giacomo Palmieri	Implementation of a Robot Assisted Framework for Rehabilitation Practices	Biomechanical Engineering

56	Sergio Rodrigo Méndez-García, Christopher René Torres-San Miguel, Juan Alejandro Flores-Campos, Octavio Ramirez, Marco Ceccarelli	Conceptual design of a Stewart Platform in a testbed for the peritoneal movements	Biomechanical Engineering
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Day 1 (7th September 2022, Wednesday):	Room 3
16:20-18:20 technical session: [6 papers x 20 min.] VEHICLE DYNAMICS AND CONTROL I	
Session Chairs: Francesco Timpone, Flavio Farroni	

13	Aleksandr Sakhnevych, Guido Napolitano dell'Annunziata, Riccardo Russo	On the vehicle stability and maneuverability domain definition for automated vehicles	Vehicle Dynamics and Control
92	Francesco Timpone, Gianpaolo Contrada, Michele Sanfelice, Vincenzo Arricale, Guido Napolitano Dell'Annunziata	Investigation of the mileage effects on the viscoelastic properties by a non-destructive method	Vehicle Dynamics and Control
41	Michele Perrelli, Francesco Cosco, Domenico Lo Polito, Domenico Mundo	Development and Validation of a Vehicle Simulation Platform for Driver-in-the-Loop Testing	Vehicle Dynamics and Control
52	Stefano Lovato, Matteo. Bova, Matteo Massaro, Mauro Andriollo, Roberto Lot	Active Steering Assistant for Powered-Two Wheelers: prototyping & preliminary results	Vehicle Dynamics and Control
55	Luca Pugi, Samuele Favilli, Lorenzo Franchi, Giuseppe Matteri, Roberto Fiorenzani, Armando Casazza	A Sliding Mode Course Control for Robust Path Following of a Fixed Wing UAV	Vehicle Dynamics and Control
59	Guido Napolitano Dell'Annunziata, Marco Ruffini, Vincenzo Maria Arricale, Flavio Farroni	Virtual 7-Post Rig: a 7 DoF Vehicle Model for Suspensions Parameters Optimization	Vehicle Dynamics and Control

DAY 2

Morning I

Day 2 (8th September 2022, Thursday):	Room 1
09:00-11:00 technical session: [6 papers x 20 min.] MECHATRONICS	
Session Chairs: Sergio Savino, Luca Bruzzone	

43	Luca Bruzzone	Comparison of PID and PII1/2DD1/2 position control of a rotor with trapezoidal velocity profile: influence of the profile parameters	Mechatronics
3	Lorenzo Baglieri, Luigi Tagliavini, Giovanni Colucci, Andrea Botta, Paride Cavallone, Giuseppe Quaglia	Simple kinematic calibration approach for eye-in-hand depth-camera	Mechatronics

26	Cosimo Fredducci, Gherardo Liverani, Alessandro Bucci, Jonathan Gelli, Lorenzo Bartalucci, Francesco Ruscio, Vincenzo Manzari, Mirko Stifani, Riccardo Costanzi, Alessandro Ridolfi	Mechatronic design of an underwater multisensor system for optical data acquisition	Mechatronics
60	Diego Tiozzo Fasiolo, Lorenzo Scalera, Eleonora Maset, and Alessandro Gasparetto	Experimental evaluation and comparison of LiDAR SLAM algorithms for mobile robotics	Mechatronics
78	Massimo Cavacece, Chiara Lanni, Giorgio Figliolini	Mechatronic Design and Experimentation of a Mecanum Four Wheeled Mobile Robot	Mechatronics
82	Luca Guagliumi, Alessandro Berti, Eros Monti, Marco Carricato	A software application for fast liquid-sloshing simulation	Mechatronics

Day 2 (8th September 2022, Thursday):	Room 2
09:00-11:00 technical session: [6 papers x 20 min.] COMPUTATIONAL KINEMATICS	
Session Chairs: Stefano Pagano, Giulio Reina	

33	Angelo Ugenti, Rocco Galati, Giacomo Mantriota, Giulio Reina	Kinematic modelling of a high mobility tracked robot	Computational Kinematics
48	Giorgio Figliolini, Chiara Lanni, Massimo Sorli	Kinematic Analysis and Centroides between Rotating Tool with Reciprocating Motion and Workpiece	Computational Kinematics
62	Hazal Emet, M. İ. Can Dede	Kinematic Representation of a Biomimetic Squid Soft Robot's Arms in a Simulation Environment	Computational Kinematics
71	Davide Guerra, Mattia Battara, Emiliano Mucchi, Giorgio Dalpiaz	Balanced Twin Lip Vane Pumps: A Kinematic Approach to The Design	Computational Kinematics
96	Andrea Lucarini and Edoardo Idà	Kinematic modeling and design of a sensorized cable-routing system for Cable-Driven Parallel Robots	Computational Kinematics
44	Daniele Stretti, Luca Bruzzone	Motion Profiles with Elliptic Jerk	Computational Kinematics

Day 2 (8th September 2022, Thursday):	Room 3
09:00-11:00 technical session: [6 papers x 20 min.] VEHICLE DYNAMICS AND CONTROL II	
Session Chairs: Mauro Velardocchia, Aleksandr Sakhnevych	

20	María Garrosa, Marco Ceccarelli, Vicente Díaz	Problems and requirements in impact analysis from vehicle accidents	Vehicle Dynamics and Control
64	Salvatore Strano, Mario Terzo, Ciro Tordela	A nonlinear estimation approach for vehicle and tire-road monitoring with no interaction	Vehicle Dynamics and Control

		modelling	
66	Valentin Ivanov, Raffaele Marotta, Salvatore Strano, Mario Terzo, Ciro Tordela	A PID-based active control of camber angles for vehicle ride comfort improvement	Vehicle Dynamics and Control
72	Henrique de Carvalho Pinheiro, Massimiliana Carello	Engineering education: exploring group projects to teach innovative automotive topics	Vehicle Dynamics and Control
77	Luigi Lentini, Luigi Mazza, Gianmarco Mossino, Terenziano Raparelli	Modelling and Identification of a Pneumatic Positioning System: a Preliminary Study	Vehicle Dynamics and Control
89	Luca Zerbato, Enrico Galvagno, Antonio Tota, Mauro Velardocchia	Car-trailer dynamics: modelling for parametric study on system stability	Vehicle Dynamics and Control

Morning II

Day 2 (8th September 2022, Thursday):	Room 1
11:30-13:10 technical session: [5 papers x 20 min.] ROBOTICS II	
Session Chairs: Giuseppe Carbone, Lorenzo Scalera	

30	Andrea Giusti, Carlo Nainer	Inverse uncertain-dynamics of robot manipulators using interval arithmetic	Robotics
35	Abdelghafour Slimane Tich Tich, Fouad Inel, Giuseppe Carbone	Realization and control of a Mecanum Wheeled Robot Based on a kinematic model	Robotics
45	Luca Bruzzone, Shahab Edin Nodehi, Vittorio Belotti, Pietro Fanghella	Actuation and control layout of the hybrid locomotion ground mobile robot WheTLHLoc	Robotics
47	Akos Odry, Istvan Kecskes, Dominik Csik, Juvenal Rodríguez-Reséndiz, Giuseppe Carbone, Peter Sarcevic	Performance Evaluation of Mobile Robot Pose Estimation in MARG-driven EKF	Robotics
53	Lorenzo Scalera, Andrea Giusti, Renato Vidoni, Alessandro Gasparetto	Online planning of path-consistent stop trajectories for collaborative robotics	Robotics

Day 2 (8th September 2022, Thursday):	Room 2
11:30-13:10 technical session: [5 papers x 20 min.] VIBRATIONS	
Session Chairs: Alessandro Gasparetto, Chiara Cosenza	

21	Kuatbay Bissembayev, Zharilkassin Iskakov, Aidana Sagadinova	Vibrations of a rigid body on rolling vibration bearings in case of accidental kinematic perturbations	Vibrations
32	Giacomo Zuccon, Lewei Tang, Alberto Doria, Matteo Bottin, Riccardo Minto, Giulio Rosati	The effect of pulleys and hooks on the vibrations of cable rehabilitation robots	Vibrations
38	Michele Zanchini, Daniel Longhi, Sara Mantovani,	On the ride comfort effect of unsprung mass reduction using a	Vibrations

	Francesco Puglisi	Composite Wheel Rim	
93	Vincenzo Niola, Sergio Savino, Chiara Cosenza, Mario Spirto, Armando Nicolella, Vincenzo Maria Arricale, Giuseppe Quaremba	Nonlinear analysis of the vibrational behavior of an internal combustion marine engine	Vibrations
94	Vincenzo Niola, Sergio Savino, Giuseppe Quaremba, Chiara Cosenza, Mario Spirto, Armando Nicolella, Luca Romagnuolo, Emma Frosina	Study of cavitation phenomenon in a proportional spool valve through chaos theory	Vibrations

Day 2 (8th September 2022, Thursday):		Room 3	
11:30-13:10 technical session: [5 papers x 20 min.] BIOMECHANICAL ENGINEERING III			
Session Chairs: Maria Cristina Valigi, Silvia Logozzo			
No.	Title	Authors	
67	Domenico Dona', Giacomo Zuccon, Matteo Bottin, Giulio Rosati	A spatial dynamic model for the simulation of human upper limb	Biomechanical Engineering
86	Luciano Tomassi, Chiara Lanni and Giorgio Figliolini	A Novel Design Method of Four-Bar Linkages Mimicking the Human Knee Joint in the Sagittal Plane	Biomechanical Engineering
7	Adithya Prakash Damarla, Marco Ceccarelli, Wenshuo Gao	Prototype and testing of a finger linkage exoskeleton	Biomechanical Engineering
8	Matteo Aquilini, Marco Ceccarelli	Design and testing of RESPIRholter device for respiratory monitoring	Biomechanical Engineering
9	Wenshuo Gao, Marco Ceccarelli	Design and testing of a lab prototype LARMbot hand	Biomechanical Engineering

DAY 3

Morning I

Day 3 (9th September 2022, Friday):		Room 1	
09:00-11:00 technical session: [6 papers x 20 min.] IFToMM JAPAN			
Session Chairs: Giuseppe Quaglia, Alessandro Gasparetto			
10	Hidetsugu Terada, Koji Makino, Xiao Sun, Jin Usami, Takeshi Saito	Development of Discontinuous Shaped Roller-chain Drive Type Wave Motion Reducer	Mechanism Design
63	Koji Makino, Hidetsugu Terada	Visualization Approach of Gaps between Rotors of an Oil Pump Based on Geometrical Arrangement	Rotor Dynamics
49	Daisuke Matsuura, Yusuke Honjo, Tsune Kobayashi, Yukio Takeda	Determination of Tooth Profile Curve of Helical Pinion and Rack Gears to Achieve Non-Constant Transmission	Gearing and Transmissions

		Ratio	
73	Takamaru Saito, Kotaro HOSHIBA, Yusuke Sugahara, Yukio Takeda	Light weight geared actuator utilizing the drive redundancy	Gearing and Transmissions
36	Yuichi Nakazato, Kitau Takase, Kensuke Takita, Masaru Higuchi	Kinetic analysis of lower limb power assist suits with biarticulate muscle structure	Biomechanical Engineering
23	Xiao Sun, Kazuyoshi Ishida, Koji Makino, Kotaro Shibayama, Hidetsugu Terada	End-effector collision avoidance system for four SCARA robots using Buffered Voronoi Cell	Robotics

Day 3 (9th September 2022, Friday):			Room 2
09:00-11:00 technical session: [5 papers x 20 min.] ROBOTICS III			
Session Chairs: Giovanni Boschetti, Sergio Savino			
57	Michele Gabrio Antonelli, Walter D'Ambrogio	Soft pneumatic helical actuator for collaborative robotics	Robotics
69	Domenico Dona', Riccardo Minto, Matteo Bottin, Giulio Rosati	A simple but effective approach to generate energy efficient trajectories of a 2dof planar manipulator	Robotics
85	Matteo Manzardo, Giovanni Carabin, Renato Vidoni	Design of a path planning method for a robotized optimal trimming	Robotics
88	Sahar Jenhani, Hassène Gritli and Giuseppe Carbone	Position Control of Lagrangian Robotic Systems via an Affine PID-based Controller and Using the LMI Approach	Robotics
91	Gabriele Maria Achilli, Silvia Logozzo, Maria Cristina Valigi, Mihai Dragusanu, Monica Malvezzi	Theoretical and experimental characterization of a new robotic gripper's joint	Robotics

Day 3 (9th September 2022, Friday):			Room 3
09:00-11:00 technical session: [5 papers x 20 min.] VEHICLE DYNAMICS AND CONTROL, VIBRATIONS			
Session Chairs: Francesco Timpone, Flavio Farroni			
97	Vincenzo Maria Arricale, Bruno Borriello, Mario De Martino, Ciro Esposito, Chiara Cosenza, Mario Spirito, Armando Nicolella, Lorenzo Mosconi and Andrea Genovese	Tire noise analysis: a correlation among track and laboratory measurements	Vehicle Dynamics and Control
106	Simone Battistini, Renato Brancati, Dario Giuseppe Lui, Francesco Tufano	Enhancing ADS and ADAS under critical road conditions through vehicle sideslip angle estimation	Vehicle Dynamics and Control

		via Unscented Kalman Filter-based Interacting Multiple Model approach	
68	Giovanni Goldoni, Sara Mantovani, Marzio Grasso, Salvatore Strano, Mario Terzo, Ciro Tordela	On the numerical modelling of conductive CNT-polymers: the electro-mechanical response	Mechatronics
99	Giovanni Iarriccio, Moslem Molaie, Antonio Zippo, Francesco Pellicano	Experiments on a quasi-zero stiffness suspension for passive vibration control	Vibrations
102	Renato Brancati, Giandomenico Di Massa, Stefano Pagano, Alberto Petrillo and Stefania Santini	A test rig for experimental investigation on a MRE vibration isolator	Vibrations
107	Anna Karpik, Francesco Cosco, Francesco Greco, Domenico Mundo	On the profitability of higher order FE formulations for structural dynamics	Vibrations

Morning II

Day 3 (9th September 2022, Friday):		Room 1	
11:30-13:00 technical session: [5 papers x 20 min.] ROBOTICS IV and COMPUTATIONAL KINEMATICS			
Session Chairs: Giuseppe Carbone, Giacomo Palmieri			
98	Federico Neri, Cecilia Scoccia, Luca Carbonari, Giacomo Palmieri, Massimo Callegari, Luigi Tagliavini, Giovanni Colucci and Giuseppe Quaglia	Dynamic Obstacle Avoidance for Omnidirectional Mobile Manipulators	Robotics
103	Ernesto Christian Orozco-Magdaleno, Eduardo Castillo-Castaneda, Giuseppe Carbone	Design of a Service Robot for High-Pressure Cleaning Tasks	Robotics
105	Matteo Formigli, Lorenzo Bonin, Paolo Gallina, Stefano Serian	Path Planning of Robot Fleet in Upside-Down Configuration	Robotics
100	Armando Nicolella, Vincenzo Niola, Stefano Pagano, Sergio Savino, Mario Spirto	An overview on the kinematic analysis of the rocker-bogie suspension for six wheeled rovers approaching an obstacle	Computational Kinematics
101	Chiara Cosenza, Vincenzo Niola, Stefano Pagano, Sergio Savino	Spring-loaded rocker-bogie suspension for six wheeled rovers	Computational Kinematics

Day 3 (9th September 2022, Friday):		Room 2	
11:30-13:00 technical session: [5 papers x 20 min.] SUSTAINABLE DEVELOPMENT GOALS II			
Session Chairs: Vincenzo Niola, Chiara Cosenza			
70	Mauro Bonfanti, Giovanni Bracco	Non-Linear Frequency Domain Modelling of a Wave Energy Harvester	Sustainable Development Goals

76	Giuseppe Giorgi, Fabio Carapellese, Giuliana Mattiazzo	Stepping-up wave energy extraction in all degrees of freedom by combining pendulum and gyroscopic effects	Sustainable Development Goals
80	Sergej. A. Sirigu, Marco Fontana, Bruno Paduano	Experimental identification of synthetic ropes stiffness for scaled mooring systems	Sustainable Development Goals
83	Ilaria Palomba, Matteo Bottin, Giulio Rosati, Alberto Doria	Multi-physical analysis of a rainfall energy harvester – sensitivity analysis	Sustainable Development Goals
104	Ettore Bianco, Luca Di Napoli, Elia Grano and Massimiliana Carello	E-scooter modelling: battery and fuel cell system integration	Sustainable Development Goals