ADM 2025 – INTERNATIONAL CONFERENCE
SEPTEMBER 03RD – 05TH 2025 – GENOVA
DIME – Dept. of Mechanical, Energy, Management and Transportation Engineering

Università di Genova

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www.adm2025.it

ADM International Conference 2025

Sept. 3rd-5th
2025

DAD Department
Stradone di Sant'Agostino, 37, Genova (Italy)

ASME SETTING THE STANDARD
ITALY SECTION

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Welcome

The **Department of Mechanical, Energy, Management and Transportation Engineering** at the University of Genoa, in collaboration with ADM – the Italian Association of Design and Methods for Industrial Engineering, is pleased to welcome all the participants to ADM2025 International Conference.

Contents

ORGANIZATION

ADM2025 is organized by ADM – Italian Association of Design Methods and Tools for Industrial Engineering, in cooperation with the Department of Mechanical, Energy, Management and Transportation Engineering of the University of Genova, Italy.

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KEYNOTES & INVITED SPEECHES

Plenary talk – Wednesday 3rd

Dr. Ivano Verzola

Lazzero Tecnologie, s.r.l.
Former Director of Volo Columbus - International Space Station) Direttore di Volo Columbus (Stazione Spaziale Internazionale)

TITLE: The International Space Station: In Space for Earth

Short BIO: for more than ten years he worked at the Columbus Control Center in Oberpfaffenhofen (Munich) for DLR, the German space agency and for ESA, the European space agency, first as a flight controller and then as flight director for Columbus, the European laboratory of the International Space Station. Responsible for the preparation and execution of on-board operations, he has led teams of engineers, technicians and astronauts in conducting scientific and system activities on board. Ivano served as Increment Lead for increment 53-54, including the "Vita" mission of European astronaut Paolo Nespoli, in collaboration with the European and international partners of the project (ESA, NASA, Roscosmos, JAXA, Canadian Space Agency). Currently Space Business Unit Manager at Lazzero Tecnologie, Ivano deals with the kickstart and expansion phase of the unit, managing projects in the space sector with public and private partners.

Abstract: The International Space Station: inhabited by astronauts continuously since 2001, it is the most advanced human outpost in space. How does that work? How do astronauts live and what activities do they carry out there? How do you manage operations on board? During the event, Ivano Verzola, former Flight Director for the International Space Station's Columbus European space module, will answer these and other space-themed questions.

Plenary talk – Thursday 5th

Dr. Sergio Dulio

Istituto Italiano di Tecnologia – Senior Advisor Technology Transfer - Istituto Italiano di Tecnologia
President - UITIC International Association of Footwear Technicians

TITLE: From atoms to bits: the digital transformation journey of a medium enterprise and of an industrial sector

Short BIO: Sergio Dulio graduated with full marks in Aeronautical Engineering in 1981 at the Milan Polytechnic. He began his professional career in the aerospace industry working first abroad and later in Italy. He then moved to IBM where he was in the technical sale support staff for 3D CAD systems (CATIA) until 1987, when his involvement with product and process technologies for footwear started. In this phase of his professional development, he worked both in industry and in research (National research Council of Italy and European research) until 2005. After a few years as a consultant for the associations ASSOCALZATURE and ASSOMAC, he was called in 2013 to create and manage ATOM Lab, the research and innovation division of the ATOM Group, a provider of footwear manufacturing technologies. Since 2021 he has been Atom Chief Technology and Innovation Officer with the task of reorganizing the R&D department in a view to the evolution from machines to systems and looking at the digital transformation of the company processes. In 2023 he has been appointed president of UITIC with the mandate of organizing the 2025 congress of the Association in Shanghai. After leaving his post in ATOM, in April 2024 he became Senior Advisor Technology Transfer of the Italian Institute of Technology, one of the most important advanced research outfits of the country with a renown international standing.

Abstract: Manufacturing products is a complex task that requires a balanced combination of consolidated know-how and of technology; this is particularly true for shoemaking that deals with a difficult product and a challenging business. The supporting manufacturing equipment are delivered by specialized providers the in time managed to evolve from conventional companies into modern suppliers of advanced technologies. The keynote will present the case history of one of the market leaders in this area that in more than 80 years since its foundation was able to transform its products and its processes extensively incorporating digital technologies at all levels.

Invited talk – Thursday 4th

Prof. Anita Catapano

École Nationale Supérieure d'Arts et Métiers - Site ENSAM, Bordeaux, FRANCE.

TITLE: Wood modeling for sustainable design

Short BIO: Anita CATAPANO is Full Professor at Bordeaux Institute of Technology as well as at the research laboratory of mechanics of Bordeaux, I2M. She is the Head of the MSc in Advanced Modelling of Structures as well as the Head of International Affairs and member of the Executive Board of her Engineering School. She leads the research team on Mechanical Analysis and Modelling of IMC department. After obtaining the MSc at Aerospace Engineering School of University of Pisa in 2009 she defended her PhD thesis in 2013 at Sorbonne University. A. CATAPANO serves as editorial board member as well as associate editor for Scientific Reports (Springer Nature) and other journals of SAGE publisher. She is coordinator for several research projects implying industrial collaborations. Her main research activities focus on the development of light multi-scale models to be integrated into design/optimization strategies for anisotropic/heterogeneous materials and structures. The fields of application are manifold: aerospace, military, biomedical, civil engineering.

Special Session Abstract: The transition of the Made in Italy sectors towards circular and sustainable models necessitates the integration of digital technologies with traditional manufacturing processes. This integration aims to develop production systems that are self-sufficient, self-regenerative, reliable, safe, and sustainable. Phygital approaches—combining physical and digital elements—enable the creation of innovative solutions that address social challenges through engineering methodologies. The session focuses on exploring engineering strategies, tools, and interdisciplinary approaches that support circular innovation across product-service systems, contributing to social development and territorial resilience.

ADM Guest – Thursday 4th

Prof. Marco Montemurro

École Nationale Supérieure d'Arts et Métiers - Site ENSAM, Bordeaux, FRANCE.

Short BIO: Marco Montemurro is a Full Professor at École Nationale Supérieure d'Arts et Métiers and has been conducting research at the I2M Laboratory in Bordeaux since September 2013. He received his Ph.D. in Mechanics at Sorbonne Universités (UPMC Paris VI) in 2012. Since 2021, he is the head of Joint Research Laboratory COSiMS between Institut de Mécanique et d'Ingénierie de Bordeaux & Commissariat à l'Énergie Atomique et aux Énergies Alternatives. His research focuses on several areas: (a) multi-scale optimisation strategies for composite and cellular structures, (b) topology optimisation algorithms based on NURBS hyper-surfaces, (c) multi-scale global/local modelling strategies for anisotropic structures, and (d) development of theoretical models based on tensor invariants for anisotropic materials and structures. He has been principal investigator / coordinator of 13 research projects with academic and industrial partners, including SAFRAN, CEA, AIRBUS, MBDA, etc. Dr. Montemurro serves as an associate editor for 17 international journals in the fields of mechanical engineering, theoretical and applied mechanics, computational methods, applied mathematics, composite materials and structures. Since 2025 he is member of the prestigious Institut Universitaire de France.

PROGRAM AT A GLANCE

3rd September 2025

	Room: Benvenuto	Room: 5L	Room: 5H	Room: 4H
13:00 - 15:00	*Welcome Lunch*			
14:15 - 15:15	Additive Manufacturing	Design for Sustainability	Methods for Medical Application	SS: Design Methods for Marine Engineering
15:15 – 16:45	Virtual & Augmented Reality	Human Factors & Ergonomics	Product Design & Engineering	Geometric Dimensioning, Tolerancing & Inspection
		Design Methods for Mobility		Image Processing & Application
16:45 – 17:15	*Coffee Break*			
17:15 – 17:45	Starting Ceremony and Institutional Welcome, Room: San Salvatore			
17:45 – 18:25	***Plenary Talk*** Dr. Ivano Verzola - Lazzero Tecnologie - Room: San Salvatore			
18:25 – 19:00	*Welcome Cocktail*			

4th September 2025

	Room: Benvenuto	Room: 5L	Room: 5H
09:00 - 09:30	*Open Coffee*		
09:30 - 10:45	Virtual Prototyping and Digital Twin	Product Design and Engineering	Additive Manufacturing
	3D Technologies for Cultural Heritage		
10:45 - 11:15	*Coffee Break*		
11:15 – 12:30	SS: Circular and Sustainable Made in Italy: Phygital Pathways for Social Innovation	Additive Manufacturing	Product Design and Engineering
12:30 – 14:00	ADM Steering TC Meeting	*Lunch*	
14:00 – 15:15	SS: Features Recognition in 3D Discrete Models	Virtual and Augmented Reality	Virtual Prototyping and Digital Twin
15:15 – 16:30	Engineering Education	Methods for Medical Applications	Product Design and Engineering
16:30 – 17:00	*Coffee Break*		
17:00 – 18:30	ADM Meeting, Room: San Salvatore		
20:00	***Gala Dinner***		

5th September 2025

	Room: Benvenuto	Room: 5L	Room: 5H
09:00 - 09:30	*Open Coffee*		
09:30 - 10:45	Design for Sustainability	Product Design and Engineering	Geometric Modeling and Processing
		3D Scanning	
10:45 - 11:15	*Coffee Break*		
11:15 – 12:30	***Plenary Talk*** Dr. Sergio Dulio - Istituto Italiano di Tecnologia - Room: San Salvatore		
12:30 – 14:00	*Farewell Lunch*		

Scientific Program – DAY 1 - Sept. 3rd

13.00 – 14.00	**Welcome Lunch**

Room 'Benvenuto'

14.15-15.15	**Session 1: Additive Manufacturing - Chairmen: Antonio Gloria, Francesca Campana**
14.15 – 14.30	**BACCIAGLIA, Antonio**, *Implicit Function-Based Modeling of Lattice Structures for Lightweight Design*
14.30 – 14.45	**ZAGO, Marco**, *Dimensional Change of 316L and Red Mud Composite Manufactured via Binder Jetting: Influence of Green Density Gradient on Sintering Deformation*
14.45 – 15.00	**SAJJAD, Ramisha**, *Preliminary Investigation of Process Parameters for Printing High Performance Single - and Multi-Material 3D-Printed Parts using PEEK and PEI*
15.00 – 15.15	**SPREAFICO, Christian**, *Eco-Design for Additive Manufacturing (EcoDAM)*
15.15-16.30	**Session 2: Virtual and Augmented Reality - Chairmen: Tommaso Ingrassia, Enrico Vezzetti**
15.15 – 15.30	**FONTANA, Carlotta**, *Space Perception in Video Passthrough Mixed Reality Experience*
15.30 – 15.45	**LAVIOLA, Desirè**, *Cultural Heritage Meets AI: Transforming Museum Experience with Virtual Agents*
15.45 – 16.00	**DE CIANTIS, Rocco**, *An AR-based Tool to Support the Inspection of Industrial Products*
16.00 – 16.15	**D'AMORE, Roberto**, *Evaluating the Impact of an AI-Driven Virtual Agent for Hotel Customer Service*
16.15 – 16.30	**CANTARELLI, Simone**, *Real-Time Incremental Point Cloud Acquisition and Spatial Bounding Box Filtering Using Lidar Sensors in Virtual Reality Environments*
16.45-17.15	**Coffee Break**

Room 5L

14.15-15.00	**Session 1: Design for Sustainability – Chairmen: Daniele Regazzoni, Alberto Vergnano**
14.15 – 14.30	**MANUGUERRA, Luca**, *A Circularity-Oriented Approach to Disassembly Time Estimation for End-of-Life Products*
14.30 – 14.45	**VERGNANO, Alberto**, *Integrating Design of Simulation Experiments and Machine Learning to predict the local Secondary Dendrite Arm Spacing for recycled AlSi7 cast parts*
14.45 – 15.00	**GIUSTI, Irene**, *Thermal Modeling and Performance Evaluation of Tesla 4680 Lithium-Ion Cell*
15.00-15.45	**Session 2: Human Factors and Ergonomics – Chairmen: Alessandro Naddeo, Andrea Vitali**
15.00 – 15.15	**CALIFANO, Rosaria**, *Age-Related Ergonomic Risks Assessment in Automotive Control Operations: Focus on Seatbelts and Reverse Gear Maneuvers*
15.15 – 15.30	**MARULLO, Giorgia**, *Assessing Physical Ergonomics in Industry 5.0: a preliminary Deep Learning-based Approach*
15.30 – 15.45	**DI MARTINO, Gianfranco**, *A Predictive Car Seats Comfort Model by using Deep Learning and CAD-CAE integrated Design Methods*
15.45-16.30	**Session 3: Design Methods for Mobility – Chairmen: Francesca De Crescenzio, Ilaria Cristofolini**
15.45 – 16.00	**CICCARELLI, Marianna**, *Investigating the Reliability of Ergonomic Assessment in Immersive Virtual Environments*
16.00 – 16.15	**GOMES Araujo**, *Requirements and approaches for using drone 3D models in Extended Reality based Simulations of Urban Air Mobility*
16.15 – 16.30	**MOSAFERCHI,** Saeedeh, *Driving into Nature or Driving with Nature: Biophilic Automated Vehicles for a Trustworthy Ride - State of the art and future pathways*
16.45-17.15	**Coffee Break**

Room 5H

14.15-15.15	**Session 1: Methods for Medical Application – Chairmen: Lapo Governi, Pietro Piazzolla**
14.15 – 14.30	**PASCOLETTI, Giulia**, *Temporomandibular Joint Prosthesis Design for Enhanced Stability and Mobility*
14.30 – 14.45	**PIAZZOLLA, Pietro**, *Optical Flow-Based Organ Tracking System for Robotic Surgery Support*
14.45 – 15.00	**MORABITO, Anna**, *A novel Shape Index-based Method for automatic Localization of Spinal Apophyses*
15.00 – 15.15	**GHIDOTTI, Anna**, *Development of a Subject-Specific Finite Element Framework for the Ankle Based on Gait Analysis*
15.15-16.45	**Session 2: Product Design/Engineering – Chairmen: Stanislao Patalano, Francesco Gherardini**
15.15 – 15.30	**PIPPO, Irene**, *Design and development of a self-centering mechanism for human joints implemented on the robot for wrist rehabilitation EDUSA® PRO*
15.30 – 15.45	**ALLIONE, Federico**, *Applications of a Novel Mechanical Linear Actuator Called Ring Screw*
15.45 – 16.00	**SPREAFICO, Christian**, *Strategic Potential of Patent-based RAG Systems for Industrial R\&D Applications: A Comparison with General-purpose LLMs*
16.00 – 16.15	**CHILLEMI, Massimiliano**, *Validation of a NACA 0018 Aluminum Wing CFD Model through Wind Tunnel Testing for AKF-based Virtual Sensing Applications*
16.15 – 16.30	**ROSSONI, Marco**, *Sensing Odors: Food Classification Using a Lightweight Transformer*
16.30 – 16.45	**RIZZIOLI, Rachele**, *Developing a Methodology to Quantify Value in Complex Systems*
16.45-17.15	**Coffee Break**

Room 4H

14.15-15.00	**Special Session: Design Methods for Marine Engineering Chairmen: Alfredo Liverani, Antonio Mancuso**
14.15 – 14.30	**DI BERNARDO, Romolo**, *A technical focus on design and analysis of 2D high-speed hydrofoils*
14.30 – 14.45	**SANTI, Gian Maria**, *Design-Driven of Marine Sandwich Structures via Additive Manufacturing*
14.45 – 15.00	**BERTOLINI, Michele**, *Integrating Artificial Intelligence and Composite Additive Manufacturing in Yacht Design: an Explorative Study*
15.00-15.45	**Session 1: Geometric Dimensioning, Tolerancing and Inspection Chairmen: Salvatore Gerbino, Gianpaolo Savio**
15.00 – 15.15	**MALTAURO, Mattia**, *A genetic algorithm to determine the nominal airfoil profile based on measured data for NACA 4- and 5-digit series*
15.15 – 15.30	**ZAGO, Marco**, *Issues and Opportunities in Additive Manufacturing Products Specification, a Review*
15.30 – 15.45	**MAGNANO, Sebastiano**, *Modular-Topology Optimization of Bridge Maintenance Articulated Robotic Arms*
15.45-16.30	**Session 2: Image Processing and Application – Chairmen: Gaetano Sequenzia, Giulia Pascoletti**
15.45 – 16.00	**BIANCONI, Francesco**, *Identification of the size distribution of SEM particles by conventional texture descriptors and deep features from pre-trained convolutional networks*
16.00 – 16.15	**FIORE, Michele**, *Electrical Wafer Sorting: a Deep Learning Approach for Advanced Wafer Defect Map Evaluation for Virtual Driving*
16.15 – 16.30	**MAGNANI, Aurora**, *Statistical Shape Modeling for Pediatric Skull Patient Analysis*
16.45-17.15	**Coffee Break**

Room 'San Salvatore'

17.15 – 17.45	Starting Ceremony and Institutional Welcome
	Prof. Giovanni **Berselli**, *General Chair*, Department of Mechanical, Energy, Management and Transportation Engineering (DIME), University of Genova
	Prof. Laura **Gaggero**, *Pro-Rector for Research*, University of Genova
	Prof. Corrado **Schenone**, *Head of the Department of Mechanical, Energy, Management and Transportation Engineering* (DIME), University of Genova
	Prof. Paolo **Di Stefano**, *ADM Scientific Coordinator Head*, Università degli Studi dell'Aquila
17.45 – 18.25	**Keynote speech**
	Dr. Ivano **Verzola**, Lazzero Tecnologie s.r.l. Title: The International Space Station: In Space for Earth

'Chiostro' Area

18.25 – 19.00	Welcome Cocktail

Scientific Program – DAY 2 - Sept. 4th

Room 'Benvenuto'

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09.45 – 10.00	**BELTRAMI, Daniele**, *Energy-Optimized Control of Battery-Electric Material Handlers*
10.00 – 10.15	**FREDDI, Marco**, *Design of Lightweight Suspension Components Using RSM*
10.15 – 10.30	**BILANCIA, Pietro**, *Digital Thread Based Simulation Framework for Robotic Manufacturing Systems*
10.30 – 10.45	**BUONAMICI, Francesco**, *Beyond Sight: Strategies to Aid Blind and Visually Impaired People in Perceiving 2D Images*
10.45-11.15	**Coffee Break**
11.15-12.30	**Special Session: Circular and Sustainable Made in Italy Phygital Pathways for Social Innovation Chairmen: Antonio Lanzotti, Anita Catapano**
11.15 – 11.45	**Prof. Anita Catapano, *Wood modeling for sustainable design (invited lecture)***
11.45 – 12.00	**CINQUE, M.**, PASQUARIELLO, A., PATALANO S., REGA A., VITOLO, F., ZANNINI M., *Digital Technologies for Sustainable and Transformative Manufacturing Systems*
12.00 – 12.15	**CAPORASO T.**, FERRI, A. ROSACE, G., SARDINI, E., LOPOMO, N. GRAZIOSO, S., TROVATO, V., ROSA, R., DOTTI, F., BOCCARDO, G., FAPANNI, T., BORGHETTI, M., LITZENBERGER, S., SANSEVERINO, G., SCHWANITZ, S., LANZOTTI, A., *AURORA: sustAinable aUgmented pRoducts for spORts and sAfety*
12.15 – 12.30	**GRAZIOSO, S.**, SABELLA, R., OSTUNI, B.M.V., LEONE, S., CAPORASO, T., LANZOTTI, A., FAPANNI, T., BORGHETTI, M., LOPOMO, N., SARDINI, E., ALBERTI, F., CAMISANI, A., *ROOTS: gReen sOft rOboTicS*
12.30-14.00	**ADM Steering TC Meeting**
12.30-14.00	**Lunch**
14.00-15.00	**Special Session: Features Recognition in 3D Discrete Models Chairmen: Franca Giannini, Silvia Biasotti**
14.00 – 14.15	**MARZOLA, Antonio**, *An Automated Pipeline for Dens Morphometry based on Enhanced Statistical Shape Modeling of the C2 Vertebra*
14.15 – 14.30	**GROSSI, Valentino**, *An intelligent framework for End-of-Life ICT components valorization: A Zero-Shot approach*
14.30 – 14.45	**BIASOTTI, Silvia**, *Feature Curve Detection & Recognition of Geometric Patterns over Cultural Heritage Artifacts*
14.45 – 15.00	**PALMIERI, Giorgio**, *Automated Monitoring of Cultural Heritage Artifacts Using Semantic Segmentation*
15.00-15.45	**Session 3: Engineering Education – Chairmen: Valerio Villa, Ileana Bodini**
15.00 – 15.15	**CECCACCI, Silvia**, *Enhancing teaching and learning through design thinking: opportunities and challenges for educational innovation*
15.15-15.30	**ROTINI, Federico**, *From interest to enrollment: a study on orientation effectiveness for first-year engineering students*
15.30-15.45	**GHERARDINI, Francesco**, *A National Overview of Engineering Technical Drawing Education in Italy: Course Content, Teaching Methods, and Assessment Practices*
16.30-17.00	**Coffee Break**

Room 5L

09.00-09.30	**Open Coffee**
09.30-10.45	**Session 1: Product Design and Engineering – Chairmen: Roberto Meneghello, Francesco Leali**
09.30 – 09.45	**CIOPPI, Enrico**, *Energy performance simulation of a home cultivator*
09.45 – 10.00	**DONNICI, Giampiero**, *Revisiting TRIZ within a QFD Framework: Methodological Insights from a Design Case Study*
10.00 – 10.15	**REGA, Andrea**, *MBSE: towards a consistent and reference-based adoption of the terms approach, method, methodology and related concepts*
10.15 – 10.30	**BAGGETTA, Mario,** *Virtual and Physical Prototyping of a Reconfigurable Four-Finger Gripper*
10.30 – 10.45	**PASQUARIELLO, Agnese**, *A Qualitative Analysis of MBSE Methodologies: Traceability & Early Design Phase Integration*
10.45-11.15	**Coffee Break**
11.15-12.30	**Session 2: Additive Manufacturing – Chairmen: Giorgio Colombo, Cristian Spreafico**
11.15 – 11.30	**TUMINO, Davide**, *Heat and Mass transfer in BCC and WBCC lattice cores: a preliminary study*
11.30 – 11.45	**DE SANTIS, Marella**, *Design and Evaluation of Interlocking Geometries for Multimaterial 3D Printing: A Combined Experimental and Numerical Approach*
11.45 – 12.00	**MOTYL, Barbara**, *How sustainable is Additive Manufacturing? An overview of Systematic Literature Reviews from 2016 to 2025*
12.00 – 12.15	**SCHIFANO, Biagio**, *Damping property evaluation of homogenized lattice structures*
12.30-14.00	**Lunch**
14.00-15.15	**Session 3: Virtual/Augmented Reality – Chairmen: Margherita Peruzzini, Giuseppe Di Gironimo**
14.00 – 14.15	**GRANDI, Fabio**, *A VR-Based Framework for Automated Scene Setup and Immersive Assembly Design Review*
14.15 – 14.30	**MASCITELLI, Giacomo**, *Enhancing the Design and Installation of Large Aerospace Testing Machines Through Augmented Reality*
14.30 – 14.45	**LAGUDI, Antonio**, *A Virtual Testbed for the development of Multi-Sensor Perception systems in ROV-Based Underwater Operations*
14.45 – 15.00	**MESSINA, Matteo**, *Effectiveness of Augmented Reality Visualisations in Engineering CAD Education*
15.00 – 15.15	**MUSOTTO, Giulio**, *Neurophysiological Study of Spatial Cognition & Language through AR and VR*
15.15-16.30	**Session 4: Methods for Medical Applications – Chairmen: Nicola Cappetti, Daniele Landi**
15.15 – 15.30	**VALENTI, Andrea**, *Effective yield stress estimation of lattice structure for biomedical application: a sensitivity analysis*
15.30 – 15.45	**DALLE MURA, Francesco**, *Towards a predictive model for objective burn scar assessment based on colour*
15.45 – 16.00	**ROMANELLI, Alessio**, *Automatic Optimization of Cutting Planes and Allograft Selection for Bone Tumor Surgery: a Case Study*
16.00 – 16.15	**CARAGIULI, Manila**, *An Adaptive Mixed-Methods Approach for the Sustainability Assessment of Innovative Healthcare Models*
16.15 – 16.30	**PIGAZZI, Riccardo**, *Design and Evaluation of a mobile Application for real-time Monitoring of physical Exercises in home-based cardiac Rehabilitation*
16.30-17.00	**Coffee Break**

Room 5H

09.00-09.30	**Open Coffee**
09.30-10.45	**Session 1: Additive Manufacturing / Virtual and Augmented Reality** **Chairmen: Gaetano Sequenzia, Manuele Guardiani**
09.30 – 09.45	**VALENTE, Daniele**, *Study and Production of EU-DEMO Divertor Outboard Target Body Mock-up using L-PBF*
09.45 – 10.00	**TROVATO, Michele**, *From Redesign to Additive Manufacturing: Approaches and Case Study in Automotive*
10.00 – 10.15	**ARAUJO DE LIMA, Gabriel**, *Conceptual design of food industry machinery: the use case of aseptic bottle filler*
10.15 – 10.30	**TORZINI, Lorenzo**, *W.R.I.S.T.: A Soft Pneumatic Prototype for Personalized Home-Based Wrist Rehabilitation*
10.30 – 10.45	**VILLECCO, Francesco**, *From Reality to Simulation: Laser Scanning and Modelling of an Automotive Circuit for Virtual Driving*
10.45-11.15	**Coffee Break**
11.15-12.45	**Session 3: Product Design and Engineering – Chairmen: Serena Graziosi, Gabriele Baronio**
11.15 – 11.45	**KUMAR, Sarvpriya Raj**, *A Semantic Middleware Architecture for PLM-ERP-MES Integration Leveraging Knowledge Graphs and AI/ML in Discrete Manufacturing*
11.45 – 12.00	**DALLE MURA, Francesco**, *Drying of wood particles – development of a simulator for machine parameter optimization*
12.00 – 12.15	**PANAROTTO, Massimo**, *Repurposing as a Design Strategy: a Multiple-Case Study Analysis*
12.15 – 12.30	**DALPADULO, Enrico**, *Needle design for piercing uncured CF-SMC: numerical model and experimental validation*
12.30-14.00	**Lunch**
14.00-15.30	**Session 4: Virtual Prototyping and Digital Twin / Design for Sustainability** **Chairmen: Marcello Pellicciari, Rocco Furferi**
14.00 – 14.15	**LAUDANI, Giuseppe**, *Static analysis of submarine optical fiber cables through digital twin modeling*
14.15 – 14.30	**SPADONI, Federico**, *Data-driven Analyses and Digital Twins to support Lifecycle and Concurrent Engineering: a Research Study for an Industrial Assessment*
14.30 – 14.45	**FERRARI, Davide**, *Assessing the validity of OpenCap for 3D falls kinematics analysis*
14.45 – 15.00	**MOSTACHETTI, Ivana**, *Comparative Evaluation of Hand Tracking Systems: Gloves Vs. Optical Sensors*
15.15 – 15.30	**COSTANTINO, Alejandra**, *Life cycle engineering in mechanical assembly: the role of additive-manufactured reinforcements in composite-metal hybrid joints*
15.30-16.30	**Session 5: Product Design and Engineering – Chairmen: Roberto Razzoli, Carlo Canali**
15.30 – 15.45	**ZHANG, Xiaoqian**, *Design of a Multi-Modal Testing Platform for HSA-Based Flexible Prosthetic Wrists*
15.45 – 16.00	**PITZALIS, Roberto,** *An Haptic Device for Catheter Based Medical Simulator*
16.00 – 16.15	**SCAGLIARINI, Chiara**, *Influence of Digital Printing Parameters and Processes on Thin-film Electrodes for Flexible Electrostatic Transducers*
16.15 – 16.30	**BOZANO, Giacomo**, *Optimal Nonlinear Series Elastic Actuators for Efficient SLIP Running of a One-Legged Robot*
16.30-17.00	**Coffee Break**

Room 'San Salvatore'

17.00 – 18.30	**ADM Meeting**

Palazzo Ducale, Salone del Maggior Consiglio

20.00 – 00.00	**GALA Dinner**

Scientific Program – DAY 3 - Sept. 5th

Room 'Benvenuto'

09.00-09.30	**Open Coffee**
09.30-10.30	**Session 1: Design for Sustainability – Chairmen: Maura Mengoni, Michele Germani**
09.30 – 09.45	**PIETRONI, Giorgia**, *Applying the Digital Product Passport for Enhanced Lifecycle Management of Electrical and Electronic Equipment: A Case Study of a Washing Machine*
09.45 – 10.00	**CHIACCHIETTA, Cesare**, *Environmental and Economic Evaluation and Comparison of Additive and Traditional Manufacturing Using a Tool for Life Cycle Engineering*
10.00 – 10.15	**MANDOLINI, Marco**, *A Framework for Eco-Design in the Furniture Sector*
10.15 – 10.30	**CAPPELLETTI, Federica**, *Applying the Circular footprint Formula to Electric and Electronic Equipment to deepen the detail of End of Life phase modelling*
10.45-11.15	**Coffee Break**

Room 5L

09.00-09.30	**Open Coffee**
09.30-10.30	**Session 1: Product Design and Engineering / 3D Scanning Chairmen: Francesco Ferrise, Pietro Bilancia**
09.30 – 09.45	**POKA, Ardit**, *Automation of the Structural Analysis on a Robot Link via Scripting in Ansys Workbench: A Tutorial*
09.45 – 10.00	**ROSSETTI, Manuele**, *A Compact Architecture for a Constant-Force Mechanism*
10.00 – 10.15	**ZHANG, Xiaoqian**, *HSA–TriGrip: Underactuated 3-Finger Auxetic Gripper for Bruise-Mitigating Fruit Harvesting*
10.15 – 10.30	**MORELLI, Massimo**, *Optimal Workflow for 3D Scanning of Garments for Metaverse: Padded Jackets Case Study*
10.45-11.15	**Coffee Break**

Room 5H

09.00-09.30	**Open Coffee**
09.30-10.30	**Session 1: Geometric Modeling and Processing – Chairmen: Luca Di Angelo, Marco Rossoni**
09.30 – 09.45	**DONETTI, Luca**, *NURBS-based Surrogate Model for Fast and High-Fidelity Predictions of Pressure Drop and Pin-fins Temperature in Traction Inverter*
09.45 – 10.00	**COZZOLINO, Mattia**, *Comparative FEM Analysis of Pressure Absorption and Diffusion in Polyurethane and Memory Foams*
10.00 – 10.15	**BARBERI, Emmanuele**, *Quantitative Analysis of Point Clouds for the Description of Complex Dynamical Systems: New Formulation of Differential Entropy and Analytical Strategies in Football Matches*
10.15 – 10.30	**BAIAMONTE, Giuliana**, *Cone-Beam Compute Tomography Scans: NURBS-Based Accurate Interproximal Molar Surfaces Reconstruction*
10.45-11.15	**Coffee Break**

Room 'San Salvatore'

11.15 – 12.30	Plenary Talk
	Dr. Sergio Dulio - Istituto Italiano di Tecnologia Title: From atoms to bits: the digital transformation journey of a medium enterprise and of an industrial sector

'Chiostro' Area

12.30 – 14.00	Farewell Lunch

USEFULL INFORMATION

Talks will be held at the **DAD Department of the University of Genoa**. It is located in the oldest and most multicultural heart of the city. Thanks to a project by architect Ignazio Gardella, who designed a new building block, the classrooms and offices of the campus are now housed within the ruins of ancient monasteries and churches surrounding the medieval core of the Bishop's Palace on Castello Hill. The restoration of the buildings of the Monastery of San Silvestro, designed by engineer Luciano Grossi Bianchi, completed the architectural intervention. Coffee breaks and lunches will be offered in the Chiostro of the ancient monastery, located at the center of the complex.

The Gala dinner will be held at **Palazzo Ducale**, in the **Sala del Maggior Consiglio**, the historic hall that once hosted the plenary sessions of the Republic of Genoa.

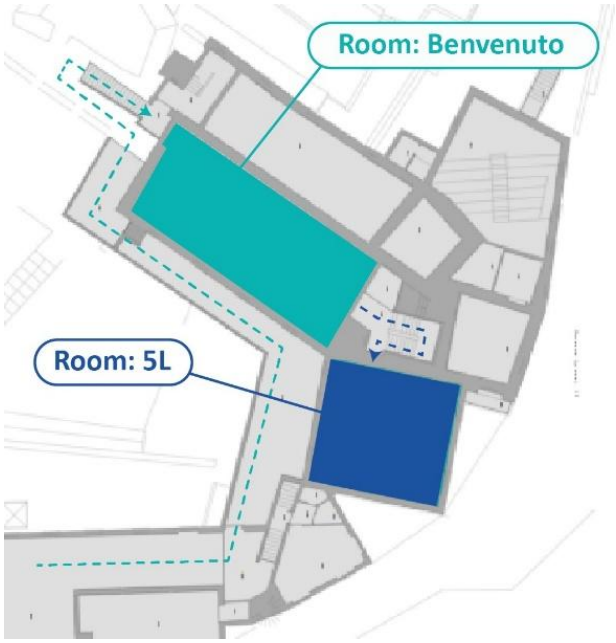
ROOM LOCATION

Aula Magna SAN SALVATORE - Piazza Sarzano

The Church of San Salvatore is a former religious building located in Piazza Sarzano, close to the former Church of Sant'Agostino. The complex has been completely renovated to house the main lecture hall of the Faculty of Architecture.

Rooms: BENVENUTO & 5L

Conference Venue 5th FLOOR

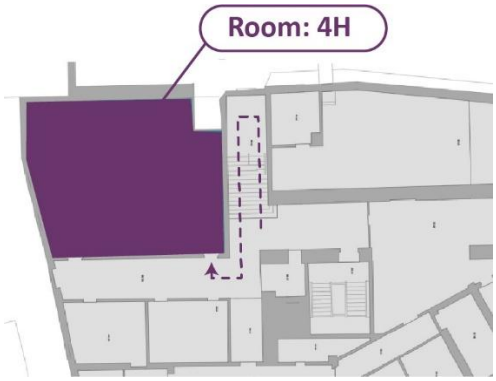


Room: 5H

Conference Venue 4th FLOOR

Room: 4H

Conference Venue 3rd FLOOR



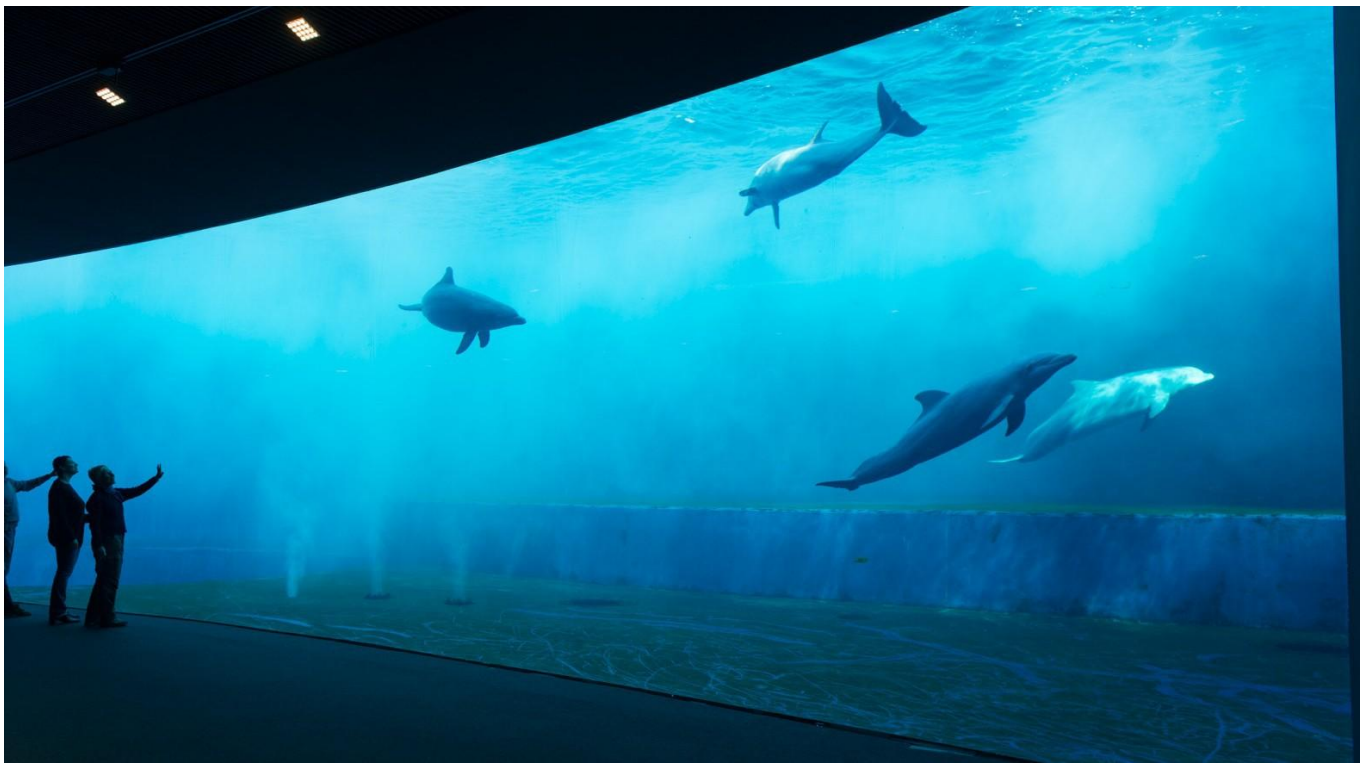
SOCIAL PROGRAM

Just an 11-minute walk from the conference venue (approximately 850 meters), the Porto Antico of Genoa is one of the city's most iconic areas. This vibrant waterfront is the heart of the historic center and the largest square on the Mediterranean, where tourism, culture, conferences, exhibitions, entertainment, sports, boating, dining, and shopping all come together. Among the main attractions in this area, we recommend visiting the Aquarium of Genoa, the Biosphere, and the Bigo panoramic lift.

***If any accompanying guests are interested in visiting these attrac*tions, tickets can be requested from the conference organizers.**

Aquarium of Genoa

The Aquarium of Genoa was built for Expo '92 to mark the 500th anniversary of Christopher Columbus's voyage to the New World. Located in the heart of the old port, it was designed to revitalize this historic area. Today, it stands as the largest aquarium in Europe, offering an immersive journey through marine ecosystems from around the globe.



Biosphere

The Biosphere is a striking glass-and-steel sphere designed by renowned architect Renzo Piano. Positioned right on the waterfront, it houses more than 150 species of plants and animals from tropical rainforests, fragile ecosystems threatened by human activity.

Bigo

Also designed by Renzo Piano, the Bigo is a panoramic elevator inspired by the cranes once used in the port. Located near the Aquarium, it offers a breathtaking 360-degree view over the Porto Antico and Genoa's historic center, one of the largest and most artistically rich in Europe.