



Conference Program

COEEE 2024

-ENERGY AND ENVIRONMENTAL ENGINEERING

ICoGB 2024

-GREEN BUILDING

May 22-24, 2024

Milan, Italy



- www.icogb.org
- www.coeee.org

WELCOME LETTER

Dear Distinguished Participants,

We are excited to announce the 2024 4th International Joint Conference on Energy and Environmental Engineering (CoEEE 2024) and the 2024 2nd International Conference on Green Building (ICoGB 2024), taking place May 22-24, 2024, in Milan, Italy. These conferences are jointly organized by Beijing Forestry University and Politecnico di Milano, with co-organizers including Xi'an Jiaotong University, University of Minho, The International Association of Electrical, Electronic and Energy Engineering, and CoreShare Academic Exchange Center.

We would like to express our sincere gratitude to all those who have dedicated their time and expertise towards making this event a reality. Our deepest gratitude goes to our esteemed Conference Chair: Prof. Gordan Huang, Prof. Yongping Li, Prof. Zhixin Wang, Prof. Paulo Mendonça, and Prof. Yupeng Wang for their invaluable contributions that have greatly contributed to the success of our preparations. Furthermore, we extend our appreciation to our distinguished Conference Co-chairs: Prof. Carol Monticelli and Prof. Stefano Capolongo, Keynote Speaker: Prof. Enedir Ghisi, and Invited Speakers: Prof. Maddalena Buffoli, Prof. Alessandra Zanelli and Dr. Febi Varghese for enriching the program with their insightful inputs.

The conferences aim to serve as a platform for sharing cutting-edge research and findings in energy and environmental engineering, as well as green building. We hope that through lively discussions and networking opportunities, participants will not only exchange ideas but also forge new partnerships and collaborations that will lead to significant advancements in these fields.

We eagerly anticipate your presence at CoEEE 2024 and ICoGB 2024, where we are confident that knowledge exchange will be both fruitful and enlightening. Moreover, we encourage you to seize this opportunity to explore the vibrant city of Milan and enjoy the rich cultural experiences it has to offer.

Thank you!

Organizing Committee
May 22-24, 2024



COMMITTEE LIST

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Gordan Huang—University of Regina, Canada

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Yupeng Wang—Xi'an Jiaotong University, China

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CONFERENCE VENUE

Conference Venue: Aula Magna of Politecnico di Milano

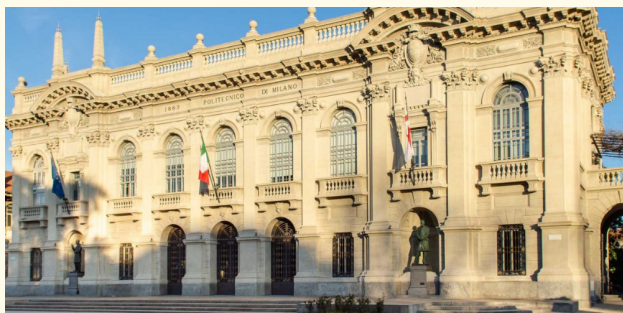
Address: Milano Città Studi-Piazza Leonardo da Vinci, 32, 20133 Milano MI, Italy

Website: <https://www.polimi.it/>

Introduction:

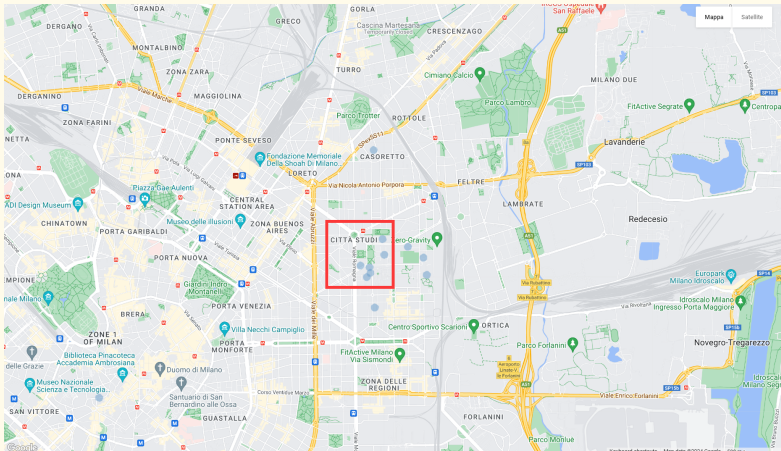
MILANO LEONARDO CAMPUS

The Milano Leonardo campus is the oldest of Politecnico di Milano's campuses. It was inaugurated in 1927 in the buildings located in Piazza Leonardo da Vinci. Over the course of the decades the campus has been expanded to encompass new campuses and given rise to a real and genuine university quarter commonly dubbed "Città Studi" (City of Studies).



CONFERENCE VENUE

Milano Città Studi



Politecnico di Milano



Browse this page for more map views: <https://maps.polimi.it/maps/>

CONFERENCE VENUE

How to get to Politecnico di Milano



- **Milan Central Station:** Take the Metro Line 2 (MM2 Green Line), direction Cologno Nord-Gessate, and get off at PIOLA station (third stop). Take the left exit of the station; follow via D'Ovidio until the intersection with via Spinoza, keep left and cross via Bonardi: at this point you have arrived in piazza Leonardo da Vinci. The Polytechnic University of Milan is the main building in front of you.
- **Piola (MM2 station):** Take the left exit of Piola station; follow via D'Ovidio until the intersection with via Spinoza, keep left and cross via Bonardi: at this point you have arrived in piazza Leonardo da Vinci. The Polytechnic University of Milan is the main building in front of you.
- **Milan Cadorna station:** Take the Metro Line 2 (MM2 Green Line), direction Cologno Nord-Gessate, and get off at PIOLA station (eighth stop). Take the left exit of the station; follow via D'Ovidio until the intersection with via Spinoza, keep left and cross via Bonardi: at this point you have arrived in piazza Leonardo da Vinci. The Polytechnic University of Milan is the main building in front of you.
- **Milan Lambrate station:** With the Metro Line 2 (MM2 Green Line), direction Abbiategrasso, reach the PIOLA station (first stop). Take the left exit of the station; follow via D'Ovidio until the intersection with via Spinoza, keep left and cross via Bonardi: at this point you have arrived in piazza Leonardo da Vinci. The Polytechnic University of Milan is the main building in front of you.

GENERAL INFORMATION

★ Registration

The registration desk will be situated at Aula Magna - Building 1 during the following time: 13:00-18:00, Wednesday, May 22, 2024.

★ Remarks

Conference will provide coffee breaks, lunch and dinner during conference days, beyond the fixed menu will be on personal bills.

★ A Polite Request to All Participants:

Participants are requested to join this onsite conference in a timely fashion. Presenters are reminded that the time slots should be divided fairly and equally by the number of presentations and that they should not be overrun. The session chairs are asked to assume this timekeeping role and to summarize key issues in each presentation.

★ Dress Code:

Business Casual, formal, or national custom is recommended.

★ Certificates

All the presenters will be awarded a participation certificate of attendance that is presented in the scheduled session, certifying the paper has been presented at the conference.

★ Awards

Certificates of Best Paper & Best Student Paper & Best Oral Presentation are settled up in our conference.

★ Time difference

GMT+1, Milan, Italy Standard Time.

Please be aware of the time difference between this and your region/country.

★ Presentation

Keynote Speech: 30 mins, including Q&A.

Oral Session: 10 mins, including Q&A.

Poster Presentation: Poster size (A1) _ Width*Height: A1 (594mm×841mm)

CONFERENCE PROGRAM

May 22-24, 2024, Milan, Italy (CMT+1)

Onsite Conference

May 22, 2024	13:00-18:00	Registration and Material Collection
		Committee Meeting
May 23, 2024	09:00-18:20	<p>Special Sessions</p> <ul style="list-style-type: none">• Acoustic and Thermal Retrofit of Office Building Stock• Dual Carbon Building Design Driven by Artificial Intelligence• Synergistic Reduction of Industrial Carbon and Pollution• Water Pollution Control and Resource Recovery
May 24, 2024	9:00-12:00	<p>Polimi Laboratory Visit</p> <ul style="list-style-type: none">• Fondazione Renzo Piano• Laboratorio Prove Materiali edificio 14 A• Textiles Hub edificio 14 A• Labora• Material Balance Saper Lab <p>Milan Arch Week Events</p>

CONFERENCE PROGRAM

May 22-24, 2024, Milan, Italy (GMT+1)

Online Conference

May 22, 2024	8:00-12:00	May 22, 2024 (China GMT+8) 14:00-18:00 Technical Test Session (For Online Participants) Test link: click here https://iaecce.mywebex.com/jaecce.my/j.php?MTID=m3a5967ed9a75c86a16ff1e006ec3d185 Meeting number: 2556 281 0342 Password: nMgBHpmG787
May 23, 2024	09:00-16:00	May 23, 2024 (China GMT+8) 15:00-22:00 Listen to Onsite Conference Conference link: click here https://iaecce.mywebex.com/jaecce.my/j.php?MTID=m7f6efc1767defb676f3d74d946a7075 Meeting number: 2557 712 7615 Password: BSfPiNXP222
	16:00-18:20	May 23, 2024 (China GMT+8) 22:00-00:20 Oral Session Conference link: click here https://iaecce.mywebex.com/jaecce.my/j.php?MTID=m7f6efc1767defb676f3d74d946a7075 Meeting number: 2557 712 7615 Password: BSfPiNXP222
May 24, 2024	9:00-12:00	Free Day

CONFERENCE PROGRAM

Location: Aula Magna Building 1

May 23rd, 2024 (Milan, Italy, GMT+1)

09:00-09:10	Opening Ceremony	Prof. Stefano Capolongo & Prof. Andrea Campioli	
09:10-9:40	Session Chair: TBD	Keynote Speaker I	Prof. EneDir Ghisi
09:40-10:10		Invited Speaker I	Prof. Maddalena Buffoli
10:10-10:40		Invited Speaker II	Prof. Alessandra Zanelli
10:40-11:00	Coffee Break & Group Photo		
11:00-11:30	Session Chair: TBD	Invited Speaker III	Dr. Febi Varghese
11:30 -12:00		Invited Speaker IV	Prof. Paulo Mendonça
12:00-14:00	Lunch Time		

Parallel Session I : Aula Magna_Building 1

14:00-16:00	Session Chairs: Prof. Rudai Shan	Oral Session	Special Sessions I-II
16:00-16:20	Coffee Break		
16:20-18:00	Session Chairs: Prof. Rudai Shan	Oral Session	Special Sessions I-II
18:00-18:20	Award Ceremony & Closing Address		

Parallel Session II : Aula Convegni - Building 15 Dept. ABC

14:00-16:00	Session Chair: Prof. Liang Huang	Oral Presentation	Special Session III-IV
16:00-16:20	Coffee Break		
16:20-18:10	Session Chair: Prof. Liang Huang & Prof. Fei He (Online)	Online Oral Session	
18:10-18:20	Award Ceremony & Closing Address (Aula Magna_Building 1)		

OPENING CEREMONY

Welcome Address: Prof. Stefano Capolongo & Prof. Andrea Campioli



Prof. Stefano Capolongo

Architect, PhD, and Full Professor in Hospital Design e Urban Health at Politecnico di Milano.

Director of the Department Architecture, Built environment and Construction engineering (ABC) at Politecnico di Milano.



Prof. Andrea Campioli

Full Professor at Politecnico di Milano.

Andrea Campioli (1962), architect, Ph. D. in Architectural Technology, since 2005 full professor of Architectural Technology at the Politecnico di Milano where he carries out research activity in the Department of Architecture, Built Environment and Construction Engineering (ABC) and he teaches in the bachelor course in “Architectural design” and in the master course in “Architecture” at the school of Architecture Urban Planning Construction Engineering.

9:00-9:10 May 23rd, 2024

Conference Room: Aula Magna - Building 1

Keynote Session

Keynote Speaker I: 9:10-9:40 May 23, 2024



Prof. EneDir Ghisi

Affiliation: Federal University of Santa Catarina, Brazil

Speech Title: The Potential for Electricity Savings by Reducing Potable Water Consumption on a City Scale

Abstract: The water sector is a major consumer of energy in the world. Energy is required for water withdrawal, for its treatment and distribution to population and for wastewater treatment. Therefore, the conservation of such resources is closely related. The objective of the speech is to discuss and present the potential for electricity savings in municipal water supply and sewage systems, resulting from the reduction of potable water consumption in residential, public and commercial buildings on a city scale. Four strategies were considered to promote potable water savings: replacement of conventional toilets with dual-flush ones, greywater reuse, rainwater harvesting and the simultaneous adoption of these three strategies. For all these scenarios, minimum and maximum water savings were determined for each type of building; the corresponding reduction of sewage production was also estimated. Minimum and maximum potential for electricity savings in water supply and sewage systems were estimated. The financial impact of such actions for the water and sewage utility was also assessed.

Biography Sketch: Prof. EneDir Ghisi obtained his PhD in Civil Engineering from the University of Leeds, in the UK, in 2002. He is currently a professor in the Department of Civil Engineering at the Federal University of Santa Catarina, located in Florianópolis, southern Brazil. So far, he has edited 10 books, published 14 book chapters, 183 conference articles and 170 journal articles. He has concluded the supervision of 14 PhD and 40 master's students. Currently, he supervises 12 PhD and 3 master's students. His research topics are thermal performance of buildings, energy efficiency in buildings, lighting, sustainability, building simulation, life cycle assessment, water consumption and rainwater harvesting in buildings. In studies carried out at Stanford University, in 2023 (DOI 10.17632/btchxktyzw.6), 2022 (DOI 10.17632/btchxktyzw.4), 2021 (DOI 10.17632/btchxktyzw.3) and also in 2020 (<https://doi.org/10.1371/journal.pbio.3000918>) Prof. EneDir Ghisi was recognised as one of the 100,000 most influential scientists in the world for the whole career and also for 2022, 2021, 2020 and 2019.

Keynote Session

Invited Speaker I: 9:40-10:10 May 23, 2024



Prof. Maddalena Buffoli

Affiliation: Polytechnic University of Milan, Italy

Speech Title: Built Environment and Health Impacts: The Role of the Design to Promote Public Health

Abstract: Public health (understood as a complete state of physical, social and psychological well-being) is closely connected to the natural and built environment in which we live.

Planning and management actions in the urban and built contexts provide several opportunities for the protection and promotion of Public Health. Indeed, health conditions depend especially on environmental, economic and social factors, which are influenced by a correct design and management of the living environment.

This presentation will illustrate, through case studies and research conducted by the Design&health Lab of the ABC Department, the aspects and evidence-based strategies that have the greatest impact on Health

Biography Sketch: Associate Professor in the field of Hygiene and Public Health – MED/42 for the courses of "Urban Health", "Environmental Hygiene" and "Technologies for Building and Environmental Hygiene" for the School of Architecture, urban planning, construction engineering (AUIC) of Politecnico di Milano. Architect and PhD in "Planning, Maintenance, Redevelopment of building and urban systems".

Since 2000 participant to numerous research, consultancy and feasibility studies of Politecnico di Milano concerning Health and Environmental Sustainability at the building and urban scales with particular reference to the planning and design of architectures for health. Regarding these issues, author of over 200 articles in specialized journals and speaker in numerous national and international conferences.

Keynote Session

Invited Speaker II : 10:10-10:40 May 23, 2024



Prof. Alessandra Zanelli

Affiliation: Polytechnic University of Milan, Italy

Speech Title:

On the way of new species of Natural Architecture

Abstract: Every technical innovation has been the subject of a "species jump" that always human ingenuity had the courage and the perseverance to work for the progress of the entire society. The species jump of a natural architecture is underway, driven by more energy-conscious design, but also thanks to the recent advancement of chemistry and automation sectors. The natural architecture of the near future will have the primary direction of saving materials and energy, considering the scarcity of planet's resources.

Similar to a natural artefact the new generation of architecture might be able to self-organize and co-evolve over time with its users, promoting peace and the co-existence of the human-kind. How far we are from this scenario is the main research question of today.

Biography Sketch: Prof. Alessandra Zanelli is a member of SPACE (Experimental process for architecture and life cycle of building products) Research Unit at the same Department. Her main interests deal with role of technological innovation in architecture and in industrial design. In particular, she has focused her attention on: temporary systems (tents, minimal units for emergency; mobile homes, etc.); adaptive systems (smart, extensible, foldable, pivots systems, etc.); application of lightweight systems and demountable buildings for dwellings. Alessandra is a professor of building technology in the degree courses in Architecture, Environmental Architecture and Building Construction at the Faculty of Architecture and Society and at the Faculty of Civil Architecture, both of the Politecnico di Milan.

Coffee Break & Group Photo 10:40-11:00



Keynote Session

Invited Speaker III: 11:00-11:30 May 23, 2024



Dr. Febi Varghese

Affiliation: DIRECTOR&CEO, KERALA STATE NIRMITHI KENDRA, GOV.OF KERALA, INDIA

Speech Title: 3D PRINTING BUILDING TECHNOLOGY- The Game Changing Future Technology

Biography Sketch: Dr. Febi Varghese is a Post Graduate in Engineering (M. Tech-First Rank) and took his PhD from the prestigious Mahatma Gandhi University. Having more than 30 years of professional experience, Dr. Febi has worked as the Director of Coir Board of India and as the Chairman & Managing Director of Travancore Cements Ltd., Managing Director of Kerala Minerals and Metals Ltd. Kerala State Industrial Enterprises Ltd., Kerala State Coir Corporation Ltd., KERALED, Kerala State Coconut Development Corporation Ltd., etc. and also worked as the Financial Analyst of United Nations. Dr. Febi Varghese has been a regular Speaker to International Conferences held in Japan, Korea, Malaysia, Hong Kong, etc. He is a Fellow of both Institution of Engineers (India) and Indian Institute of Technical Arbitrators and recipient of Management Excellence Award. Dr. Febi has umpteen number of published Papers and Books and Patented Product to his credit.

Keynote Session

Invited Speaker IV: 11:30-12:00 May 23, 2024



Prof. Paulo Mendonca

Affiliation: University of Minho (EAAD), Portugal

Speech Title: Circular Economy in Lightweight Structures – Report on a Test Cell Design

Abstract: Membranes can be a good environmental and economically viable solution. The reuse of maritime containers as building structures can also be interesting for the same reasons. Both systems present some functional problems in temperate climates, due to the fact that these are lightweight and thin, so they lack on thermal mass and acoustic insulation, that need to be evaluated under real life conditions. Some previous studies where the first author was involved were already developed and proved that membrane structures can easily adjust to the specific micro climatic conditions of temperate climates [1]. What is proposed in this research is to combine containers with membranes in order to achieve better mechanical and functional performance. This communication presents a test cell design using membranes as exterior coating and maritime containers with three compartments, two facing south to be used as test cells and one, larger, to be used as a research lab on the north side. The east and west facades are covered with PVC coated polyester as well as the roof, such in a previous test cell facility designed by the first author and built in the same location that was used for several tests from 2010 till 2015 [2, 3]. Some solar passive techniques used in this building are reflected on the north façade which consists on a pneumatic translucent membrane and a ventilated roof with an anticlastic shape membrane. The purpose of this building is to be used as test cell to perform qualitative and quantitative analysis of variable panel designs to be used as insulation and thermal mass in the interior coatings. These panels will be made of different composite materials to be tested on its thermal and acoustic performance, such as in previous studies from the first author [1, 4, 5]. The results of this research help in devising and studying the methodologies to promote a circular economy in construction sector.

Lunch Time 12:00-14:00 May 23, 2024



Oral Session

Location: Aula Magna Building 1
14:00-18:20 May 23rd, 2024 (GMT+1)

Special Session I - Acoustic and Thermal Retrofit of Office Building Stock

14:00-14:10 GC051		Prof. Michela Buzzetti Affiliation: Politecnico di Milano, Italy Paper Title: Sustainability Qualification Tool for Italian Multi-family Buildings
14:10-14:20 GC052		Dr. Andrea Giovanni Mainini Affiliation: Politecnico di Milano, Italy Paper Title: Greening cities and buildings for climate Resilience (Design): Lessons from Lambrate Park District in Milan
14:20-14:30 GC004		Han Xiu Affiliation: Soochow University, China Paper Title: Environmental Sustainability and Architectural Design Analysis of Taihu Olympic Sports Center Gymnasium
14:30-14:40 GC023		Joaquin Garcia Affiliation: University of Brescia, Brescia, Italy Paper Title: Assessing the Sound Insulation and Thermal Performance of a Recycled Based Partition as a Sustainable Retrofitting Solution for Buildings
14:40-14:50 GC024		Tomas Simon Gomez Affiliation: University of Brescia, Colombian Paper Title: Development of a Mycomaterial Based on Textile and Agro-industrial Waste for Thermal Insulation
14:50-15:00 GC034		Harold Enrique Huerto Cardenas Affiliation: Politecnico di Milano, Italy Paper Title: Energy and Economic Analysis of the Retrofit of Two Residential Buildings: The Role of the Superbonus 110% Incentive in Italy

15:00-15:10 GC044		<p>Giulia Procaccini</p> <p>Affiliation: Politecnico di Milano, Italy</p> <p>Paper Title: The Applications and Potentialities of Textile Façade Retrofit Strategies for Energy-Efficient and Resilient Buildings</p>
15:10-15:20 GC055		<p>Yonca Yaman</p> <p>Affiliation: Dokuz Eylül University, Turkey</p> <p>Paper Title: An Optimization of Thermal, Visual and Energy Indicators for Retrofit with Photobioreactors in the Mediterranean Climate</p>
15:20-15:30 TE008		<p>Ernu Zhang</p> <p>Affiliation: SPIC Central Research Institute, China</p> <p>Paper Title: Offshore Wind Power Digital Twin System Based on Data Governance and Maintenance Decision Process with Application of Artificial Intelligence and its Application on Wind Turbine Intelligent Operation and Maintenance</p>
15:30-15:40 TE009		<p>Qiwen Jiang</p> <p>Affiliation: Xi'an Jiaotong University, China</p> <p>Paper Title: Optimization of Indoor Quality and Thermal Comfort for University Classrooms Using Data-Based Machine Learning</p>
15:40-15:50 TE027		<p>Prof. Ivan Endara Velez</p> <p>Affiliation: University of Queensland, Australia</p> <p>Paper Title: Optimal Maintenance Management for Synchronous Generators: A ConditionBased Approach to Predict and Assess Equipment Wear</p>

Special Session II - Dual Carbon Building Design Driven by Artificial Intelligence

15:50-16:00 GC041		<p>Prof. Rudai Shan</p> <p>Affiliation: Northeastern University, China</p> <p>Paper Title: A Novel Sensitivity Analysis of Residential Building Retrofitting Strategies: Artificial Neural Network VS. Linear Regression</p>
<p>Afternoon Coffee Break 16:00-16:20 May 23, 2024</p> 		
16:20-16:30 GC025		<p>Prof. Julia Nerantzia Tzortzi</p> <p>Affiliation: Department of Architecture, Built Environment and Construction Engineering, Italy</p> <p>Paper Title: Strategies and Solutions to Green Concrete Construction Material</p>
16:30-16:40 GC026		<p>Prof. Julia Nerantzia Tzortzi</p> <p>Affiliation: Politecnico di Milano, Italy</p> <p>Paper Title: A Comprehensive Framework for Living Wall Design: Bridging Standards, Current Approaches, and Unexplored Frontiers in Architectural and Structural Practices</p>
16:40-16:50 TE1002		<p>Prof. Yanshan Gao</p> <p>Affiliation: Beijing Forestry University, China</p> <p>Paper Title: Research on the Application of Monolithic Catalysts in Air Pollution Control</p>
16:50-17:00 GC008		<p>Hakan Baş</p> <p>Affiliation: İzmir Katip Çelebi University, Turkish</p> <p>Paper Title: Energy-Efficient House Design in the Mediterranean Climate</p>

17:00-17:10 GC010		<p>Tiantian He</p> <p>Affiliation: Chongqing University, China</p> <p>Paper Title: Linking Emotion to Risk-taking Behaviours of Construction Workers: Appraisal-Tendency Framework</p>
17:10-17:20 GC011		<p>Fabian Edenhofner</p> <p>Affiliation: Digital Engineering and Robotics in Construction RWTH Aachen University</p> <p>Paper Title: Towards BIM-based Digital Twinning of BIPV(T)-Façades</p>
17:20-17:30 GC012		<p>Ieva Poderytė</p> <p>Affiliation: Vilnius Gediminas Technical University, Lithuania</p> <p>Paper Title: The Embeddedness of Sustainability in the Construction Industry: Identifying Key Drivers and Barriers to Implementation</p>
17:30-17:40 GC021		<p>Ilaria Pugliese</p> <p>Affiliation: Politecnico di Milano, Italy</p> <p>Paper Title: From Bio-residues to Construction Applications: A Comprehensive Framework</p>
17:40-17:50 GC022		<p>Maria Giovanna Di Bitonto</p> <p>Affiliation: Politecnico di Milano, Italy</p> <p>Paper Title: Fog harvesting for green facades</p>
17:50-18:00 GC057		<p>Yangxiaoxia Li</p> <p>Affiliation: Politecnico di Milano, Italy</p> <p>Paper Title: Methodologies for Assessing Building Embodied Carbon in a Circular Economy Perspective</p>

Award Ceremony & Closing Address

Aula Magna_Building 1 18:00-18:20 May 23rd, 2024

Prof. Carol Monticelli Polytechnic University of Milan, Italy



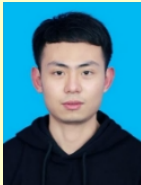



Oral Session

Parallel Session II : Aula Convegni - Building 15 Dept. ABC

14:00-18:10 May 23rd, 2024 (GMT+1)

Special Session III - Synergistic Reduction of Industrial Carbon and Pollution

14:00-14:10		<p>Prof. Liang Huang Affiliation: Beijing Forestry University, China</p> <p>Paper Title: Research Progress on Solid CO₂ Adsorbent Materials</p>
14:10-14:20 TE033		<p>Prof. Ligia Maria Carvalho Sousa Affiliation: University of the International Integration of Afro-Brazilian Lusophony (UNILAB), Brazil</p> <p>Paper Title: Development of a Meteorological Data Acquisition Prototype: A Low-Cost and Mobile Proposal</p>
14:20-14:30 TE030		<p>Zhe Li Affiliation: Beijing Forestry University, China</p> <p>Paper Title: Design of bifunctional Cu-SSZ-13@Mn₂Cu₁Al₁₀O_x core-shell catalyst with superior activity for simultaneous removal of VOCs and No_x</p>

14:30-14:40 GC040		Shanggang He Affiliation: Southeast University, China Paper Title: Identifying Time Wastage of Prefabricated Building Hoisting Operations Based on the MODAPTS and Field Measurement Method: A Case Study in Nanjing, China
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Special Session IV - Water Pollution Control and Resource Recovery



14:40-14:50 TE005		Dr. Yi Wang Affiliation: State Key Lab of NBC for Civilian Protection, China Paper Title: Reverse Osmosis Membrane with Crown Ethers Decoration for Enhanced Radionuclides Sieving
14:50-15:00 GC019		Claudia Marín Affiliation: University of Lleida, (UdL), Spain Paper Title: Water Retention Additives for a Drier World: Green Roofs and Hydrogels
15:00-15:10 GC020		Georgio Farah Affiliation: University of Lleida, Spain Paper Title: Phytoremediation in Green Roofs
15:10-15:20 TE016		Tuğçe DEMİR Affiliation: Bolu Abant İzzet Baysal University, Turkey Paper Title: Evaluation of Electro-Dewatered Waste Sludge on Land Applications in Terms of Metal Species

Online Oral Session

Special Session III - Synergistic Reduction of Industrial Carbon and Pollution

15:20-18:20 May 23rd, 2024(Milan, GMT+1)

21:20-00:20 May 23rd, 2024(Beijing, GMT+8)

15:20-15:30 TE034		<p>Prof. Fei He</p> <p>Affiliation: Nanjing University of Science and Technology, China</p> <p>Paper Title: Catalyst Deactivation in Photocatalytic Air Purification and its Countermeasures</p>
15:30-15:40 TE029		<p>Prof. Hongwei Sun</p> <p>Affiliation: Central China Normal University, China</p> <p>Paper Title: Electrochemical Synthesis of Chlorine Disinfectant Driven by Solar Energy for Ballast Water Sterilization</p>
15:40-15:50 TE035		<p>Prof. Dengrong Sun</p> <p>Affiliation: Sichuan University, China</p> <p>Paper Title: Spatial Regulation of Metal Species in MOFs for Photocatalytic Applications</p>
15:50-16:00 TE031		<p>Prof. Fengming Du</p> <p>Affiliation: Dalian Maritime University, China</p> <p>Paper Title: Research on the Carbon Emission Reduction of Internal Combustion Engines by Reducing Friction Work</p>

Afternoon Coffee Break 16:00-16:20 May 23rd, 2024




Online Oral Session



Special Session I - Acoustic and Thermal Retrofit of Office Building Stock

16:20-16:30 GC032		Chunya Wu Affiliation: University of Hawai'i at Mānoa, USA Paper Title: WINDOW VIEWS PSYCHOLOGICAL AND PHYSIOLOGICAL EFFECTS ON INDOOR THERMAL PERCEPTION: A Comparison Experiment Based on Virtual Reality Environments
16:30-16:40 GC033		Inas Al Khatib Affiliation: The American University in Sharjah, United Arab Emirates Paper Title: A Missing Fifth Sustainability Dimension (Wellbeing & Health) When Describing Eco-Districts
16:40-16:50 GC054		Ranran Feng Affiliation: Northwestern Polytechnical University, China Paper Title: Indoor Thermal Comfort Demands of The Elderly in Winter in Rural Xi'an, China

Special Session II - Dual Carbon Building Design Driven by Artificial Intelligence

16:50-17:00 GC001		Aijie Gu Affiliation: China construction FANGCHENG (Tianjin) Urban Construction Development Co., LTD Paper Title: Calculation Method and Application of Carbon Emission in Newly Built Urban District
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17:00-17:10 GC007		Akshay Raj Affiliation: Christ University, India Speech Title: A Review of Biophilic Design at Kuttikattoor School for the Children
17:10-17:20 GC046		Zuliang Lu Affiliation: Northeastern University, China Speech Title: Reuse Strategies and Green Building Performance Simulation of Jincheng Cocoon Station
17:20-17:30 GC028		Mohamad Fouad Hanifa Affiliation: School of Architecture, Art, and Design, Portugal Paper Title: Embodied Carbon and Thermal Simulation of Structural Earthen Composites with Natural materials and byproducts suitable for Robotic Fabrication
17:30-17:40 GC048		Wanyu Lai Affiliation: Northeastern University, China Paper Title: Multi-objective Optimisation for Residential Buildings Retrofitting Based on ANN and NSGA-II
17:40-17:50 GC050		Hanyu Leng Affiliation: China Construction Science and Industry Corporation Ltd. Paper Title: Exploration of the Application of Generative Design Algorithms and Modular Construction Techniques in the Redevelopment of High-Density Urban Areas
17:50-18:00 TE1003		Yu Zhang Affiliation: Kunming University of Science and Technology, China

		Paper Title: Scalable Synthesis of the Lithium Silicate-Based High-Temperature CO ₂ Sorbent from Inexpensive Raw Material
18:00-18:10 TE032		Zuoli He Affiliation: Shandong University, China Paper Title: Design and Application Strategies of Semiconductor Heterojunction Photocatalysts for Wastewater Treatments
Poster GC002		Prof. Xiaoyan Jiang Affiliation: Hefei University of Technology, China Paper Title: Carbon Emissions of Cast-in-Place and Prefabricated Buildings: A Comparative Analysis and Carbon Reduction Strategy
Listener TE016		Prof. Nazlı BALDAN PAKDİL Bolu Abant İzzet Baysal University, Türkiye

Award Ceremony & Closing Address

Aula Magna_Building 1 18:00-18:20 May 23rd, 2024



Acknowledgement	
Paulo Mendonça	University of Minho (EAAD), Portugal
Carol Monticelli	Polytechnic University of Milan, Italy
Stefano Capolongo	Polytechnic University of Milan, Italy
Andrea Campioli	Polytechnic University of Milan, Italy
Prof. Liang Huang	Beijing Forestry University, China
Rudai Shan	Northeastern University, China
Fei He	Nanjing University of Science and Technology, China

Visit of Laboratory of Politecnico di Milano

May 24, 2024 (Milan, Italy)

Meeting at 9:15 in the courtyard Trifoglio Enterign in the renzo Piano Foundation and brief intro to the refurbishment of the Campus and to lab visits. (Gathering time: 25 mins)

Group 1			
	Start	End	
Fondazione Renzo Piano	09:40	10:10	30 mins
Laboratorio Prove Materiali edificio 14 A	10:15	10:35	20 mins
Textiles Hub edificio 14 A	10:35	10:55	20mins
Labora	11:00	11:45	45 mins
Material Balance Saper Lab	12:00	12:15	15 mins

Group 2			
	Start	End	
Fondazione Renzo Piano	09:40	10:10	30 mins
Material Balance Saper Lab	10:15	10:35	20 mins
Laboratorio Prove Materiali edificio 14 A	10:45	11:05	20 mins
Textiles Hub edificio 14 A	11:10	11:30	20 mins
Labora IN VIA DI CONFERMA	11:45	12:30	45 mins

Arch Week Events

Welcome to Arch Week in Milan!

Milano Arch Week is an international festival dedicated to architecture, urban transformations and the future of cities, promoted by Comune di Milano, Politecnico di Milano and Triennale Milano, with the artistic direction of Stefano Boeri, President of Triennale Milano.

We have collected a bunch of spectacular Arch week activities for your reference. Please arrange your own travel according to your plan, and wish you a pleasant and rewarding experience in Milan.



The full Program of the Milan Arch Week is here attached,

For more information, please click the link below to get the entire schedule.

[\(Click Here\)](#)

Note

Note

Organizers



POLITECNICO
MILANO 1863



北京林业大学
BEIJING FORESTRY UNIVERSITY

Sponsor



Co-organizers



西安交通大学
XI'AN JIAOTONG UNIVERSITY



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