

CUTTING-EDGE TECHNOLOGIES AND MANAGEMENT IN
STRUCTURAL ENGINEERING AND CONSTRUCTION

EURO SEC 6

The Sixth European Structural Engineering
and Construction Conference

DETAILED TECHNICAL PROGRAM



**Politecnico
di Torino**

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EURO SEC 6 – Detailed Technical Program

Monday – September 7, 2026		
17:00 - 20:00	Registration	Emma Strada Hall
18:00 - 20:00	Icebreaker & Welcome Reception – Drinks and Light Refreshments, accompanied by Live Piano Music	Emma Strada Hall
Tuesday – September 8, 2026		
Registration & Coffee		
08:30 - 17:00	Registration (The registration desk will be open during conference hours)	P Classrooms Hall
Opening Session		
09:00 - 09:30	Welcome Address by the Conference Chairs <i>Prof. Valentina Villa and Prof. Marco Domaneschi</i>	Room P2
	Institutional Welcome Addresses by Politecnico di Torino Representatives <i>Prof. Sebastiano Foti, Head of the Department of Structural, Geotechnical and Building Engineering (DISEG), Politecnico di Torino</i> <i>Prof. Alberto Sapora, Vice Rector for International Affairs, Politecnico di Torino</i>	
	Welcome Address <i>Prof. Amarjit Singh, President, ISEC Society</i>	
	Announcements <i>Prof. Marco Domaneschi, Conference Chair</i>	
09:30 - 09:50	Choir Performance <i>Piccoli Cantori di Torino, conducted by Carlo Pavese, with Gianfranco Montalto at the piano</i>	P Classrooms Hall
09:50 - 10:20	Keynote I: “From Data to Decisions: Cyber-Physical Systems and Agentic Approach for the Built Environment” <i>Prof. Alessandro Carbonari</i>	Room P2
10:20 - 10:30	Sponsor Presentation: BEAVERIFY <i>Prof. Valentina Gatteschi</i>	Room P2
Tea & Coffee Break 10:30 - 11:00		



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Technical Session I – Tuesday, September 8, 2026, 11:00 - 12:30

	Room 1P Chair: <i>Viktor Gribniak</i> Co-chair: <i>Shozo Nakamura</i> Infrastructure Management and Monitoring	Room 2P Chair: <i>Gulden Gumusburun Ayalp</i> Co-chair: <i>Flavia-Ioana Patrascu</i> Prefabricated and Modular Construction	Room 3P Chair: <i>Arturo E. Schultz</i> Co-chair: <i>Omar Asfour</i> Building Envelope, Thermal Comfort and Indoor Environmental Quality	Room 4P Chair: <i>Dejan Dinevski</i> Co-chair: <i>Ahmed Al-Bayati</i> Built Heritage, Adaptive Reuse and Residential Built Environment
11:00 - 11:15	CON-20, INTEGRATING CONSISTENCY CONSTRAINTS INTO SUSTAINABLE PAVEMENT MAINTENANCE OPTIMIZATION <i>Jorge Peris-Belenguer, Noelia Molinero-Pérez, M. Amalia Sanz-Benlloch, and Tatiana García-Segura</i>	CTE-09, MAPPING PRECAST CONCRETE TECHNOLOGY LANDSCAPE THROUGH PATENT ANALYSIS <i>Biemo W. Soemardi, Andira T. Purti, and Muhamad Abduh</i>	AAQ-02, IMPACT OF MODERATE THERMAL MASS ON INDOOR THERMAL COMFORT AND HEALTH CONDITIONS OF SCHOOL BUILDINGS <i>Bin Su, Peter McPherson, Renata Jadresin Milic, and Yusef Patel</i>	AAE-09, CASE STUDY ON UTILIZING DIGITAL TECHNOLOGY FOR THE PRESERVATION OF HISTORIC WOODEN STRUCTURES <i>Keimi Harada, Taku Ueno, and Sotaro Yoshikawa</i>
11:15 - 11:30	STR-48, STRUCTURAL DAMAGE DETECTION USING CONTINUOUS WAVELET TRANSFORM AND SHORT-TIME FOURIER TRANSFORM FOR STRUCTURAL HEALTH MONITORING <i>Mohammad Shamim Miah and Werner Lienhart</i>	CON-07, USE OF CONCRETE PREFABRICATED PREFINISHED VOLUMETRIC CONSTRUCTION FOR A 63-STORY RESIDENTIAL TOWER <i>Tan Teng Hooi, Maey Leow Geok Mui, Wong Seng, and Heng Kim Huat</i>	AAE-01, WIND RESISTANCE OF VENTILATED EXTERIOR WALL SYSTEMS WITH AND WITHOUT HORIZONTAL GAPS IN OUTER WALL <i>Yasushi Uematsu, Keijiro Hosokawa, and Wei Ding</i>	AAE-16, CHARACTERISTICS OF MEDIEVAL BUDDHIST ARCHITECTURE AND CONTEMPORARY CASE STUDY BASED ON MEDIEVAL ARCHITECTURAL PRINCIPLES <i>Keimi Harada and Sotaro Yoshikawa</i>
11:30 - 11:45	FAM-04, 3D POINT CLOUD-BASED GEOMETRIC AND SAFETY PERFORMANCE ANALYSIS OF SPEED CALMING DEVICES <i>Patraphorn Phronthepkasemsant, Pacharapol Ngamsamer, Phatsaphan Chamwasununth, and Petcharat Limsupreeyarat</i>	AAE-05, SHEAR STRENGTH OF PRECAST CONCRETE WALL VERTICAL JOINTS: COMPARISON OF INTERNATIONAL DESIGN <i>Jin-Hui Lee, Jae-Yong Jeong, Jin-Seok Woo, Hyun-Do Yun, Soo-Yeon Seo, Wan-Shin Park, Sun-Woo Kim, and Gun-Woo Jung</i>	STR-21, INTUMESCENT-ENHANCED PLASTERBOARD: A PATHWAY TO IMPROVED THERMAL INSULATION AND FIRE RESISTANCE <i>Md Kamrul Hassan, Md Rayhan Hasnat, and Swapan Saha</i>	AAE-20, ADAPTIVE REUSE OF BUILDINGS AS A SUSTAINABLE TRANSFORMATION STRATEGY: ECONOMIC, ENVIRONMENTAL, AND SOCIAL IMPACTS <i>Naol Alemayehu and Omar S. Asfour</i>
11:45 - 12:00	INF-01, STREAMLINING INFORMATION FLOW IN CIVIL INFRASTRUCTURE INSPECTION THROUGH AUTOMATED REGISTRATION PROCEDURES <i>Leonardo Binni, Alessandro Carbonari, and Massimo Vaccarini</i>	HOS-02, SUSTAINABLE TECHNOLOGIES FOR OFF-GRID, AFFORDABLE WOODEN TINY HOUSES FOR TOURISM EXPLOITATION IN RURAL AREAS <i>Antonio Vottari, Paolo Piantanida, and Claudia Pilar</i>	AAQ-13, FROM COMFORT INDICATORS TO COMFORT OPPORTUNITIES: A MULTISENSORY ASSESSMENT OF UNIVERSITY STUDENT HUB CENTERS <i>Lama S.M Abumoeilak, Taher El Danaf, Reejy Atef Abdelatty Mikhail, and Ayman Abdulrahim Kassem</i>	AAE-02, CONDOMINIUM RESIDENT BEHAVIORS IN INNOVATION ACCEPTANCE: CONFIRMATORY FACTOR ANALYSIS APPROACH <i>Kongkoon Tochaiwat, Vitoon Pawanacharum, and Patcharida Seniwigong</i>
12:00 - 12:15	FAM-06, ASSESSING THE VALUE OF SMART CONTRACTS IN DIGITAL BRIDGE MAINTENANCE SYSTEMS <i>Leonardo Zunino, Valentina Villa, Valentina Gatteschi, and Marco Domaneschi</i>	CON-22, HOW PREFABRICATED FACADE ELEMENTS CAN SIGNIFICANTLY INCREASE THE GERMAN RENOVATION RATE <i>Falk Mattuczak and Stefanie Samtleben</i>	SUS-02, SUSTAINABLE HVAC SYSTEM DESIGN STRATEGY FOR OPTIMIZING PLANT GROWTH ENVIRONMENT AND ENERGY EFFICIENCY IN GREENHOUSE <i>Doyoung Lee, Jeonghwan Seo, Joungheo Heo, Donggeun Oh, Hyounseung Jang, Jimin Kim, and Dawoon Jung</i>	AAE-03, AN ANALYSIS OF THE INNOVATIONS REQUIRED BY RESIDENTS IN CONDOMINIUM PROJECTS <i>Patcharida Seniwigong, Kongkoon Tochaiwat, and Vitoon Pawanacharum</i>
12:15 - 12:30	CON-48, MACHINE LEARNING MODEL FOR ESTIMATING THE COST OVERRUN OF PROCUREMENT MATERIALS IN CONSTRUCTION PROJECTS <i>Awsan Mohammed</i>	CON-40, THERMAL PERFORMANCE OF SAROOJ VERSUS CEMENT PLASTER IN HOT ARID CLIMATES <i>Mohammed Javeed Siddique and Talal Al Wahaibi</i>		HOS-01, THE FACTORS AFFECTING CUSTOMER TRUST TOWARDS DEVELOPERS IN RESIDENTIAL CONDOMINIUM BUSINESS <i>Anuwat Budda, Kongkoon Tochaiwat, and Vitoon Pawanacharum</i>
Lunch Break: 12:30 - 13:30				



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Technical Session II – Tuesday, September 8, 2026, 13:30 - 15:00

	Room 1P Chair: Edward Jaselskis Co-chair: Mohammad Ilbeigi Emerging Digital Technologies and Construction Site Automation	Room 2P Chair: Shozo Nakamura Co-chair: Wei Ding Advances in Bridge and Structural Engineering	Room 3P Chair: Sam Fragomeni Co-chair: Maciej Szeląg Sustainable and Advanced Cementitious Materials	Room 4P Chair: Laura Montalbán-Domingo Co-chair: Paola Alice Rosa Cavallaro Digitalization and Data Interoperability in Construction
13:30 - 13:45	CON-59, PERCEIVED IMPORTANCE OF AUGMENTED/VIRTUAL/MIXED REALITY ON CONSTRUCTION TIME, COST, AND QUALITY <i>Handan Kunkcu, Idil Calik, Kerim Koc, and Asli Pelin Gurgun</i>	STR-03, STRUCTURAL BEHAVIOR OF ASYMMETRICAL VARIABLE-HEIGHT TRUSS GIRDERS IN PEDESTRIAN BRIDGES <i>Philippe Van Bogaert</i>	CTE-26, ENHANCING CO ₂ SEQUESTRATION AND STRENGTH OF CEMENT WASTE-DERIVED PORTLANDITE MORTARS THROUGH MOISTURE CONTROL <i>Ziaurrahman Ali, Saheed Kolawole Adekunle, and Rida Alwi Assaggaf</i>	CON-23, USAGE OF FEDERATED DATA SPACES IN THE CONSTRUCTION INDUSTRY <i>Stefanie Samtleben and Falk Mattuczak</i>
13:45 - 14:00	CPS-01, 4D CHRONOGRAPHICAL SPATIOTEMPORAL MODELLING FOR CONSTRUCTION PROJECT PLANNING <i>Adel Francis</i>	STR-40, OUT-OF-PLANE PERFORMANCE OF POWER ACTUATED FASTENER ATTACHMENTS UNDER MONOTONIC AND CYCLIC LOADING <i>Arturo Schultz, David Amori, Olugbenga Falomo, and Scott Overacker</i>	CTE-02, IMPROVING THE PERFORMANCE OF BIOCHAR FINE AGGREGATE VIA CEMENT PASTE-BASED SURFACE COATING <i>Jae-Yong Jeong, Jin-Seok Woo, Jin-Hui Lee, Hyun-Do Yun, Wonchang Choi, Wan-Shin Park, Sun-Woo Kim, and Nam-hyun Kim</i>	CON-18, A FRAMEWORK FOR DESCRIBING DIGITAL DATA TRANSACTIONS IN CONSTRUCTION PROCESSES FOR DATASPACE IMPLEMENTATION <i>Lukas Krone, Franziska Katharina Schmidt, Nadja Gravina, Agnes Kelm, and Anica Meins-Becker</i>
14:00 - 14:15	CON-09, TERRESTRIAL LASER SCANNING IN CONSTRUCTION QUALITY PROCESS REVIEW <i>Jolanta Tamošaitienė and Evaldas Matuzevičius</i>	STR-18, FATIGUE ASSESSMENT OF STEEL-CONCRETE COMPOSITE BRIDGES USING NONLINEAR FINITE ELEMENT ANALYSIS AND NEURAL NETWORK <i>Peter Grubits, Maurizio Morgese, Majid Movahedi Rad, and Ali Maher</i>	CON-37, MACHINE LEARNING PREDICTION OF TENSILE PROPERTIES OF ENGINEERED CEMENTITIOUS COMPOSITES <i>Amro Adel Seifelnasr, M. A. Alhaj-Hussein, Jamal A. Abdalla, Rami A. Haweeleh, and Adil K. Al-Tamimi</i>	CON-17, CONSISTENT DATA FLOWS IN CONSTRUCTION: DIGITAL PRODUCT PASSPORTS FOR EFFICIENCY, TRANSPARENCY, AND SUSTAINABILITY <i>Nadja Gravina, Franziska Katharina Schmidt, Lukas Krone, Agnes Kelm, and Anica Meins-Becker</i>
14:15 - 14:30	CSA-04, EXTENDING AI AGENTS WITH SPATIAL REASONING CAPABILITIES FOR SAFETY MANAGEMENT OF CONSTRUCTION SITES <i>Alessandro Carbonari, Alessandra Corneli, Tommaso Pieroni, and Berardo Naticchia</i>	STR-12, FIELD TESTING OF A BRIDGE SIZE TWO-CELL RC BOX CULVERT <i>Issam Harik, Aaron Cole, Abheetha Peiris, and Cody Hutchinson</i>	CTE-05, EXPERIMENTAL STUDY ON BACTERIAL BRICK AGGREGATE CONCRETE USING SPOROSARCINA PASTEURII <i>Joyanta Pal</i>	AAE-04, DIGITAL TWIN COLLABORATION: AN INTEROPERABLE DATA TRANSFORMATION PROCESS FOR THE BUILDING AND AUTOMOTIVE INDUSTRIES <i>Luisa Braun, Peter Boettcher, and Frank Scholzen</i>
14:30 - 14:45	CON-34, IMPLEMENTATION OF INTERNET OF THINGS IN CONSTRUCTION PROJECT LIFE CYCLE <i>Handan Kunkcu, Idil Calik, Kerim Koc, Asli Pelin Gurgun, and Deniz Besiktepe</i>	STR-33, A GENETIC ALGORITHM-BASED TOOL FOR OPTIMIZING COMPOSITE BRIDGE DESIGN <i>Ali Yousefi, Valentina Boretti, Umberto Folco, Pietro Palumbo, Rodolfo Epicoco, Daniele Cantelmi, and Davide Masera</i>	CTE-07, SULFATE RESISTANCE OF MORTAR INCORPORATED WITH RICE STRAW ASH <i>Gopinandan Dey, Nani Gopal Paul, and Surajit Munshi</i>	CON-14, DATA LEAN LOGISTICS: ONTOLOGY-BASED EXECUTION-ORIENTED CONSTRUCTION CONTROLLING <i>Mohannad Esmail, Agnes Kelm, and Anica Meins-Becker</i>
14:45 - 15:00		STR-02, EFFECT OF THE SLANT OF EDGE GIRDERS ON SINGLE-SPAN STEEL ROAD BRIDGES <i>Philippe Van Bogaert</i>	SUS-24, CONSTRUCTION AND DEMOLITION WASTE FINE AGGREGATE FOR SUSTAINABLE 3D PRINTABLE CONCRETE: RHEOLOGICAL AND MECHANICAL PERFORMANCE <i>Mohammad Omar AlOsta and Faisal Mukhtar</i>	CON-10, A SEMANTIC WEB APPROACH FOR CONSTRUCTION SITE AND URBAN MANAGEMENT IN MINOR HISTORICAL CENTRES <i>Marianna Rotilio, Davide Simeone, Letizia Giusti, and Chiara Marchionni</i>
Tea & Coffee Break 15:00 - 15:45				



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Technical Session III – Tuesday, September 8, 2026, 15:45 - 17:15

	Room 1P Chair: <i>Biemo Soemardi</i> Co-chair: <i>Reejy Atef Abdelatty Mikhail</i> Sustainability, Life Cycle Assessment and Environmental Certification	Room 2P Chair: <i>Naser Kabashi</i> Co-chair: <i>Jeung-Hwan Doh</i> Composite Elements and FRP Strengthening	Room 3P Chair: <i>Swapan Saha</i> Co-chair: <i>Billel Salhi</i> Infrastructure Risk Management and Disaster Resilience	Room 4P Chair: <i>Evangelos Sapountzakis</i> Co-chair: <i>Faisal Mukhtar</i> Computational Methods and Structural Optimization
15:45 - 16:00	SUS-03, CLIMATE IMPACTS OF TIMBER BUILDINGS: COMPARISON OF STATIC AND DYNAMIC LIFE CYCLE ASSESSMENTS <i>Ambrose Doodoo and Bishnu Chandra Poudel</i>	STR-07, COMBINATION EFFECT OF HIGH-STRENGTH CONCRETE-FILLED HIGH-STRENGTH CIRCULAR STEEL TUBE WITH I-SHAPED CFRP <i>Guochang Li, Xuefang Zhang, and Runze Liu</i>	RAD-03, EXPERIMENTAL EVALUATION OF EVACUATION MOTIVATION THROUGH SEQUENTIAL FIRE SCENARIO PRESENTATION IN VR <i>Kyohei Yamaguchi</i>	STR-15, MULTI-MATERIAL TOPOLOGY OPTIMIZATION FOR IMPROVED STIFFNESS USING BESO <i>Muayad Habashneh and Majid Movahedi Rad</i>
16:00 - 16:15	SUS-08, CONTRIBUTION OF CONSTRUCTION 4.0 TO SUSTAINABILITY IN BUILDING CONSTRUCTION: SYSTEMATIC REVIEW <i>Gonzalo Garcés-Rodríguez, Laura Montalbán-Domingo, Noelia Molinero-Pérez, and Amalia Sanz-Benlloch</i>	STR-31, FINITE ELEMENT ANALYSIS OF I-SHAPED CFRP-ENCASED CONCRETE-FILLED SQUARE STEEL TUBULAR COLUMNS UNDER CYCLIC LOADING <i>Mengge Li, Zengmei Qiu, and Ting Xu</i>	RAD-04, BASIC STUDY ON RISK PERCEPTION OF FLOODWATER DEPTH FROM INSIDE VEHICLES DURING FLOOD DISASTERS <i>Kyohei Yamaguchi</i>	STR-05, ALGORITHM DEVELOPMENT AND PARALLELIZATION IN COMPUTATIONAL MECHANICS <i>Marko Kegl, Boštjan Harl, Dejan Dinevski, and Jožef Predan</i>
16:15 - 16:30	SUS-09, COMBINING LIFE CYCLE APPROACH AND CIRCULARITY ASSESSMENT FOR HOLISTIC EVALUATION OF BUILDING ENVELOPE RETROFITS <i>Marianna Rotilio, Chiara Marchionni, and Letizia Giusti</i>	CTE-21, INTERFACE SHEAR TRANSFER OF SELF-COMPACTING GEOPOLYMER INFILL IN COLD-FORMED STEEL COMPOSITE COLUMNS <i>Serene Sara Simon, Bidur Kafle, and Riyadh Al-Ameri</i>	RAD-01, MAPPING SUSTAINABILITY RISKS IN POST-DISASTER TEMPORARY HOUSING: A CO-OCCURRENCE-BASED BIBLIOMETRIC ANALYSIS <i>Gulden Gumusburun Ayalp and Merve Serter</i>	STR-08, DEVELOPING ADAPTIVE LIGHTWEIGHT STRUCTURES: AVOIDING OPTIMIZATION DEADLOCKS THROUGH STAGED AND MANUFACTURABLE DESIGN <i>Viktor Gribniak, Leva Misiūnaitė, and Arvydas Rimkus</i>
16:30 - 16:45	SUS-10, COMPARATIVE REVIEW OF MATERIAL CRITERIA IN GREEN BUILDING SYSTEMS <i>Emine Derya Deniz and Ruveyda Komurlu</i>	CTE-14, INFLUENCE OF CURVATURE ON TENSILE BEHAVIOR OF PBO-REINFORCED CONCRETE <i>Constanze Reuter and Klaus Holschemacher</i>	RAD-11, DISASTER IMPACTS ON URBAN SEWERAGE SYSTEMS: EVIDENCE FROM MUNICIPAL 311 SERVICE REQUESTS IN LOUISIANA, USA <i>Flavia-Ioana Patrascu, Syed Mostofa Asif, and Heloyse Leonard-Saillant</i>	GFE-11, SETTLEMENT PREDICTION OF FIBER-REINFORCED COHESIONLESS SOILS USING MACHINE LEARNING (ML) <i>Lujain Abu Sarhan, Hiba Faisal, Magdi El-Emam, and Mousa Attom</i>
16:45 - 17:00	SUS-20, THE ANALYSIS OF KEY ASPECTS IN SUSTAINABLE CONSTRUCTION BASED ON ENVIRONMENTAL PRODUCT DECLARATIONS (EPDS) <i>Jolanta Tamošaitienė and Erikas Lenkevičius</i>	AAE-06, SEISMIC PERFORMANCE OF SQUAT RC SHEAR WALLS WITH DIFFERENT FRP HORIZONTAL REINFORCEMENT <i>Jin-Seok Woo, Jae-Yong Jeong, Jin-Hui Lee, Hyun-Do Yun, Won-Chang Choi, Wan-Shin Park, Sun-Woo Kim, Hae-In Kim, and Seung-Beom Kang</i>	STR-69, NEAR-REAL-TIME SENSOR-DRIVEN SHELL FINITE ELEMENT SYNCHRONIZATION FOR STEEL BEAM DIGITAL TWINS <i>Diego Hermógenes and Muhammad Kalimur Rahman</i>	STR-19, TNN-BASED INVERSE CALIBRATION OF DEM PARAMETERS FOR COLORED SELF-COMPACTING CONCRETE <i>Vahid Shafaie and Majid Movahedi Rad</i>
17:00 - 17:15	SUS-21, BITUMEN-DERIVED CARBON COATED SAND FOR ENHANCED THERMAL CONDUCTIVITY <i>Shaik Inayath Basha, Kaman Manickavasakam, Mazen Anwar Abdullah, Abbas Saeed Hakeem, Mohammed A. Alosta, and Mohammed Abdul Aziz</i>	STR-24, SHEAR BEHAVIOR AND STRENGTH EVALUATION OF HVFA CONCRETE BEAMS <i>Yune Tominaga, Mai Kimura, Bunka Son, Tomoyuki Koyama, and Yuping Sun</i>		STR-04, PEAK WIND FORCE COEFFICIENTS FOR DESIGNING CLADDING/COMPONENTS OF VAULTED FREE ROOFS <i>Wei Ding, Yasushi Uematsu, and Momoka Seki</i>



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Poster Session – Tuesday, September 8, 09:00 to Wednesday, September 9, 16:30

Chair: *Amarjit Singh*
Co-chair: *Arturo E. Schultz*

1	AAE-08, DATA-DRIVEN DESIGN FOR ZERO-EMISSION NEIGHBOURHOODS: INSIGHTS FROM THE MILAN BOVISA CASE STUDY <i>Andrea Giuseppe di Stefano, Davide Galbiati, Davide Puricelli, Mattia Bosio, Matteo Ruta, and Gabriele Masera</i>
2	CTE-28, FEASIBILITY STUDY ON MULTI RECYCLED CONCRETE POWDER FOR CARBON SEQUESTRATION AND CEMENT REPLACEMENT <i>Jeonghyun Kim and Andrzej Ubysz</i>
3	CTE-29, UTILIZATION OF CO ₂ -MINERALIZED RECYCLED POWDER FROM A 65-YEAR-OLD CONCRETE STRUCTURE AS A CEMENTITIOUS BINDER <i>Jeonghyun Kim, Alena Sicakova, Girts Bumanis, and Diana Bajare</i>
4	CTE-15, EVALUATION OF MECHANICAL AND DURABILITY PROPERTIES OF CONCRETE WITH INCREASED LEVELS OF SUPPLEMENTARY CEMENTITIOUS MATERIALS <i>Yoonsuk Choi, Hokyu Kim, and Bongchun Lee</i>
5	SUS-19, DURABILITY OF CONCRETE MODIFIED WITH WASTE POWDER COATINGS: A SUSTAINABLE APPROACH <i>Bernardeta Dębska, Janusz Konkol, Jerzy Szyszka, Andriy Huts, Guilherme Brigolini Silva, Cristopher Antonio Martins de Moura, Wioleta Iskra-Kozak, and Barbara Pilch-Pitera</i>
6	WRE-02, LARGE-SURFACE-AREA DATE-PALM-POLLEN-DERIVED ACTIVATED CARBON ELECTRODES FOR CAPACITIVE DEIONIZATION <i>Billel Salhi</i>





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Wednesday – September 9, 2026

08:30 - 14:00	Registration (The registration desk will be open during conference hours)	P Classrooms Hall
08:50 - 09:20	Keynote II: “Advances of Artificial Intelligence in Structural and Building Engineering” <i>Prof. Giuseppe Carlo Marano</i>	Room P2
09:20 - 09:30	Sponsor Presentation: Masera Engineering <i>Ing. Valentina Boretti</i>	
09:30 - 09:35	Announcements <i>Prof. Marco Domaneschi, Conference Chair</i>	





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Technical Session IV – Wednesday, September 9, 2026, 09:35 - 11:05

	Room 1P Chair: <i>Ruveyda Komurlu</i> Co-chair: <i>Marco Alvise Bragadin</i> Artificial Intelligence for Cost and Schedule Forecasting	Room 2P Chair: <i>Tomoyuki Koyama</i> Co-chair: <i>Bernardeta Dębska</i> Low-Carbon Cements and Alternative Binders	Room 3P Chair: <i>Adel Francis</i> Co-chair: <i>Ambrose Dadoo</i> Planning, Decision-Making and Digital Asset Management in the Built Environment	Room 4P Chair: <i>Gulden Gumusburun Ayalp</i> Co-chair: <i>Leonardo Zunino</i> Environmental Engineering, Water Resources and Urban Decarbonization
09:35 - 09:50	CON-15, AI FRAMEWORK FOR IMPROVING CONSTRUCTION PROJECT SUCCESS <i>Edward Jaselskis, Gongfan Chen, Michael Pedraza, Roya Albaloul, Alex Albert, and Mohamed Mostafa</i>	CTE-20, INFLUENCE OF GUAR GUM BIOPOLYMER ON HYDRATION KINETICS, PERFORMANCE AND MICROSTRUCTURE OF LC3 CEMENT <i>M. Aminul Haque, Anwar Hosan, Saheed Kolawole Adekunle, and Mohammed Al-Osta</i>	OAG-02, VALUE ENGINEERING OPTIMIZATION OF CSPP IN CONSTRUCTION <i>Zubair Ur Rehman Ansari</i>	ENV-06, WASTEWATER TREATMENT UPGRADE CONFLICT <i>Amarjit Singh and Heather Madsen</i>
09:50 - 10:05	CPM-05, AI METHODS FOR COST OVERRUNS AND DELAYS FORECASTING <i>Lucia-Gabriela Chávez-Quiroga, Tatiana García-Segura, Begoña Moreno-Escobar, and Laura Montalbán-Domingo</i>	CTE-13, COMPARATIVE STUDY ON THE MECHANICAL PROPERTIES AND CARBONATION RESISTANCE OF RM-GGBFS-BASED AAM AND CEMENT SYSTEMS <i>Jeung-Hwan Doh, Tianyu Sun, Dominic E.L. Ong, Sam Fragomeni, and Zhongyuan Ren</i>	FAM-07, BLOCKCHAIN-ENABLED DIGITAL TICKETING AND MAINTENANCE SYSTEM FOR HOSPITAL FIRE SAFETY <i>Noemi Romani, Valentina Villa, Marco Domaneschi, Valentina Gatteschi, and Riccardo de Caria</i>	CON-33, TOWS MATRIX ANALYSIS OF CUT AND BEND APPLICATION IN WATER RESOURCE CONSTRUCTION PROJECTS IN THAILAND: A QUALITATIVE EXPLORATORY CASE STUDY <i>Somjintana Kanangkaew, Natee Suriyanon, Tanawat Chamtranupon, Manop Kaewmorachoen, and Phatsaphan Chamwasununth</i>
10:05 - 10:20	CPM-08, SINGLE VALUE OR RANGE? RETHINKING COST ESTIMATION IN CONSTRUCTION PROJECTS <i>Aynur Hürriyet Türkyılmaz, Gül Polat, and Aslı Pelin Gürgün</i>	CTE-17, THERMALLY INDUCED CRACKING PATTERNS OF BASALT POWDER-MODIFIED CEMENT PASTES <i>Maciej Szełąg</i>	FAM-03, EVALUATION OF LLM FOR DECISION-MAKING REGARDING THE NECESSITY OF TAKING MEASURES AGAINST BRIDGE DAMAGE <i>Teruyuki Miyakawa, Shozo Nakamura, and Takafumi Nishikawa</i>	HAH-01, MANAGEMENT OF DISPUTE RESOLUTION IN A PUBLIC HYDRAULIC INFRASTRUCTURE: THE TECHNICAL ADVISORY BOARD <i>Paola Provenzano, Pierluigi Di Palma, Andrea Mazzanti, Aldo Linguiti, Arturo Varzi, and Maria Cestari</i>
10:20 - 10:35	CPM-03, CAUSES OF PROJECT DELAYS AND COST OVERRUNS IN INFRASTRUCTURE PROJECTS <i>Marta Mierzejek</i>	CTE-16, EFFECT OF MAGNETIC FIELD AND TITANIUM OXIDE NANOPARTICLES ON THE MECHANICAL PROPERTIES OF CONCRETE <i>Jana Bilal Shmaysem and Alissar Yehya</i>	PND-02, REASSESSING TIME ZONES: SOLAR DEVIATION, TEMPORAL EQUITY, AND FEASIBILITY <i>Amarjit Singh and Sankalp Rampuriya</i>	CPM-12, BEYOND REGULATIONS: THE INFLUENCE OF SUBJECTIVE NORMS ON CONSTRUCTION WASTE MANAGEMENT COMPLIANCE IN MALAYSIA <i>Fetty Nurshazwani Elisya Azhar, Nur Izzati Ab Rani, and Nur Kamaliah Mustafa</i>
10:35 - 10:50	CON-36, BARRIERS AND SUCCESS FACTORS TO ADOPTING ARTIFICIAL INTELLIGENCE IN PROCUREMENT FOR CONSTRUCTION PROJECTS <i>Nursyahirah Wafa, Abdelrahman M. Farouk, Hariharan Naganathan, Rahimi A. Rahman, and Ahmad Rizal Alias</i>	GFE-14, PREDICTIVE MODELING OF TIME-DEPENDENT STRENGTH DEVELOPMENT IN FERRUGINOUS SANDY SAPROLITES STABILIZED WITH POLYESTER AND MICROBIAL POLYSACCHARIDE USING COMPARATIVE GENETIC PROGRAMMING <i>Fazal E. Jalal, Mubashir Aziz, Syed Taseer Abbas Jaffar, and Mohammed Ali Al-Osta</i>	CPM-09, COMPARING FRONT-END PLANNING PRACTICES ACROSS DIFFERENT SECTORS IN MEGAPROJECTS <i>Rakan Albalawi, Faisal Alshaye, and Basel Sultan</i>	HAH-03, ASSESSMENT OF GLOBAL AND HIGH-RESOLUTION DEMS FOR HYDROLOGIC ANALYSIS IN COMPLEX TERRAIN <i>Ahmed Al-Areeq</i>
10:50 - 11:05	CPM-10, ADVANTAGES AND BARRIERS OF ADOPTING COLLABORATIVE ENGINEERING CONTRACTS FOR COST MANAGEMENT <i>Wing Chi Tsang and Hiu King Ma</i>	CTE-24, BIOPOLYMER-MODIFIED CEMENTITIOUS MATERIALS FOR 3D PRINTED COMPOSITE: RHEOLOGY, PRINTABILITY, AND SUSTAINABILITY – A REVIEW <i>Anwar Hosan, M Aminul Haque, Faisal Mukhtar, and Mohammed Ali Al-Osta</i>		AAE-07, AI-DRIVEN FRAMEWORK FOR ZERO-EMISSION NEIGHBORHOODS: MACHINE LEARNING APPLICATIONS IN EARLY-STAGE URBAN ENERGY PLANNING <i>Andrea Giuseppe di Stefano, Davide Galbiati, Davide Puricelli, Mattia Bosio, Mattia Federico Leone, Matteo Ruta, and Gabriele Masera</i>

Tea & Coffee Break 11:05 - 11:30



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Technical Session V – Wednesday, September 9, 2026, 11:30 - 13:00

	Room 1P Chair: <i>Swapan Saha</i> Co-chair: <i>Saheed Kolawole Adekunle</i> Construction Site Safety and Worker Health	Room 2P Chair: <i>Paola Provenzano</i> Co-chair: <i>Asli Pelin Gurgun</i> Contracts, Procurement and Dispute Resolution	Room 3P Chair: <i>Guochang Li</i> Co-chair: <i>Leonardo Zunino</i> Seismic Assessment and Retrofitting of Existing Structures	
11:30 - 11:45	CSA-08, PPE NON-COMPLIANCE FACTORS IN CONSTRUCTION: THE GAP BETWEEN ACADEMIA AND PRACTICE <i>Ahmed Jalil Al-Bayati and Vigneshkumar Chellappa</i>	LDR-07, TOWARD EVIDENCE-BASED ADR SELECTION IN CONSTRUCTION: A REVIEW OF PRACTICE GAPS <i>George Gaiho, George Agyekum-Mensah, Yuting Chen, and Yusuf Ibraheem</i>	STR-51, SEISMIC PERFORMANCE ASSESSMENT OF A BASE ISOLATED REINFORCED CONCRETE BRIDGE <i>Imran Khan, Rodolfo Jr Mendoza, Evan Joseph Brutas, Masayuki Kaneko, Shintaro Muto, and Yasuo Kannami</i>	
11:45 - 12:00	CSA-03, COMPARATIVE ANALYSIS OF AUTOMATED ERGONOMIC RISK ASSESSMENT METHODS <i>Gun Kuk, Dahyun Jung, Seungkeun Yeom, Jinwoo Choi, and Taeheon Hong</i>	LDR-08, TOWARDS STRUCTURED ADR SELECTION IN CONSTRUCTION: EVIDENCE FROM A SCENARIO-BASED PILOT STUDY <i>George Gaiho, George Agyekum-Mensah, Yuting Chen, and Yusuf Ibraheem</i>	STR-17, SEISMIC RETROFIT OF REINFORCED CONCRETE BUILDINGS USING BASE ISOLATION METHODS AND NEGATIVE STIFFNESS-BASED SEISMIC PROTECTION SYSTEMS <i>Evangelos J. Sapountzakis, and Konstantinos A. Kapasakalis</i>	
12:00 - 12:15	EPE-13, INTEGRATING DESIGN FOR SAFETY (DFS) INTO CIVIL ENGINEERING EDUCATION <i>Ahmed Jalil Al-Bayati and Erik Backus</i>	PRO-05, STRATEGIC OVERSIGHT OF PUBLIC PRIVATE PARTNERSHIP PROJECTS: POLICY FRAMEWORK AND FINANCIAL RISK <i>Ala' Mustafa Shukri Ahmad and Gökhan Tunç</i>	STR-06, STRENGTHENING AND RETROFIT OF A HISTORIC THEATRE MASONRY SYSTEM USING GFRP MESH <i>Naser Kabashi, Enes Krasniqi, Milot Muhaxheri, and Ylli Murati</i>	
12:15 - 12:30	CSA-07, EVALUATING THE APPLICABILITY OF ASTM FOOTWEAR STANDARDS IN COLD AND SLIPPERY CONSTRUCTION ENVIRONMENTS <i>Uttam Kumar Pal and Chengyi Zhang</i>	PRO-04, OPENING THE BLACK-BOX: A SYSTEMS APPROACH TO RETHINKING SOCIAL VALUE IN INFRASTRUCTURE WORKFORCE PROGRAMS <i>Malsha Gimhani Kathriarachchige Dona, Muhammad Jamaluddin Thaheem, Dominic Doe Ahiaga-Dagbui, and Asheem Shrestha</i>	STR-50, MACHINE LEARNING-BASED INVERSE DESIGN OF ECCENTRICALLY LOADED RECTANGULAR CONCRETE-FILLED STEEL TUBE (R-CFST) COLUMNS <i>Hadia Eltayeb Ahmed, Jamal A. Abdalla, and Rami A. Hawileh</i>	
12:30 - 12:45	PIP-01, DISTRIBUTED SENSING THROUGH FBG-BASED OPTICAL FIBER SENSORS <i>Khurram Karim Qureshi, Musab Magam, Sheikh Iqbal, and Edwin Pun</i>	LDR-02, EVALUATION OF TEXT UNITS AND RETRIEVAL METHODS FOR SIMILAR CASE RETRIEVAL IN CONSTRUCTION ARBITRATION <i>Dajeong Choi, Choongwan Koo, Seungwon Seo, Yujin Choi, Seongkyun Ahn, and Woojae Lee</i>	STR-37, THE HARVEST AND PROTECT PARADIGM: A BRIEF STATE-OF-THE-ART REVIEW OF MAIN DUAL-FUNCTIONAL HIGH-RISE BUILDING SYSTEMS <i>Santiago Londono, Jamil Munir Farah Michail, Uwais Safdar Ulde, Agathoklis Giaralis, and Marco Domaneschi</i>	
12:45 - 13:00	RAD-10, MULTI-HAZARD RESILIENCE OF UNDERGROUND STATION RETROFITTED WITH FLAME-RETARDANT ARAMID SHEETS <i>Jinho Kim, Chanwoo Park, and Hyun-Kyu Jun</i>	PRO-01, AN AGENT-BASED FRAMEWORK OF THE CONTRACTOR SELECTION PROCESS USING MULTI-CRITERIA DECISION MAKING APPROACH <i>Rita Elias Awwad, Jana Elias Rima, and Sarah Nour Elias Roukos</i>	STR-46, NONLINEAR SEISMIC PERFORMANCE EVALUATION OF AN OPERATING TBM(TUNNEL BORING MACHINE) TUNNEL <i>Byoungil Choi, Seajun Pak, Junhyung Kim, and Yuntae Sim</i>	
Lunch Break: 13:00 – 13:45				



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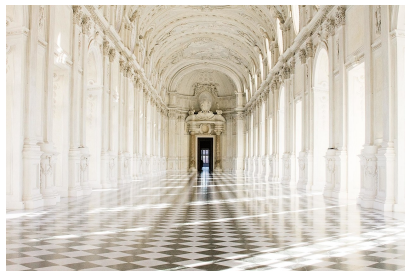
Technical Session VI – Wednesday, September 9, 2026, 13:45 – 15:15

	Room 1P Chair: <i>Viktor Gribniak</i> Co-chair: <i>Paolo Piantanida</i> Engineering Education, Ethics and Professional Development	Room 2P Chair: <i>Asli Pelin Gurgun</i> Co-chair: <i>Ahmed Al-Bayati</i> Construction Safety: Prevention, Productivity and Digital Intervention	Room 3P Chair: <i>Petcharat Limsupreeyarat</i> Co-chair: <i>Santiago Londono-Lopez</i> Structural Strengthening, Durability and Resilience under Extreme Actions	
13:45 - 14:00	EPE-02, EVOLUTION OF CONSTRUCTION WORKERS' REQUIRED QUALIFICATION IN AUTOMATION ERA: A CASE OF ROBOTIC WELDING <i>Mohammad Ilbeigi</i>	CSA-17, RETHINKING BUILDING SAFETY: A VIEWPOINT ON INTEGRATING PREVENTION THROUGH DESIGN (PTD) DURING THE OCCUPANCY PHASE <i>Martina Jasoffa Omar, Farrah Zuhairah Ismail, Syahrul Nizam Kamaruzzaman, Myzatul Aishah Kamarazaly, Norsyamimi Samsudin, Alwi Zakaria, Shoeb Ahmed Memon, and Mazlina Zaira Mohammad</i>	STR-67, CYCLIC PERFORMANCE OF RC BRIDGE PIERS RETROFITTED WITH PRESTRESSED FE-SMA BARS: APPLIED ELEMENT SIMULATION <i>Mohamedalhag Mohamed and Faisal Mukhtar</i>	
14:00 - 14:15	EPE-11, FROM CIVIL ENGINEERING TO CONSTRUCTION: A NEW PARADIGM FOR UNDERGRADUATE EDUCATION <i>Biemo W. Soemardi, Reini D. Wirahadikusumah, and Muhamad Abduh</i>	CSA-05, QUALITY ASSESSMENT OF HEALTH AND SAFETY CONSTRUCTION PROJECT SCHEDULE <i>Marco Alvise Bragadin and Benedetta Balzani</i>	STR-30, PRESSURE-IMPULSE DIAGRAM PREDICTION OF RC BEAMS AND COLUMNS BASED ON SECTION STRENGTHS <i>Hyunseung Chung and Hyo-Gyoung Kwak</i>	
14:15 - 14:30	EPE-10, TEACHING METHODS, PRACTICES, PREFERENCES AND OUTCOMES IN ENGINEERING EDUCATION <i>Basima Issa</i>	CSA-09, AUTOMATED CONFIDENCE-ACCURACY GAP PROFILING AND LLM-BASED SAFETY INTERVENTION FOR CONSTRUCTION SITE MANAGERS <i>Seung-Hyeon Shin, Jeong-Hun Won, Kwan-Hee Yoo, Tae-Kyung Kim, and Min-Koo Kim</i>	CTE-32, FRM-CONCRETE BOND BEHAVIOR ACROSS MULTIPLE CONFIGURATIONS <i>Mohammad Omar AIOsta and Faisal Mukhtar</i>	
14:30 - 14:45	EPE-09, ETHICAL GOVERNANCE AND INSTITUTIONAL RESILIENCE IN POST-DISASTER EDUCATIONAL INFRASTRUCTURE <i>Basima Issa</i>	CTE-25, VALIDATION OF PORTLANDITE AVAILABILITY AS A GOVERNING PARAMETER IN HIGH-KAOLINITE LOW-CLINKER LC3 BINDERS <i>Jamir Uddin Mamun, Saheed Kolawole Adekunle, and Md. Aminul Haque</i>	SUS-23, DEVELOPMENT OF A FLAX SEED-DERIVED HYDROGEL AS A SUSTAINABLE CORROSION INHIBITOR FOR STEEL PROTECTION <i>Shaik Inayath Basha, Saviour A. Umoren, and Mohammed A. Alost</i>	
14:45 - 15:00		RAD-09, RISK DRIVERS IN MEGA-SCALE CONSTRUCTION PROJECTS: AN SEM-BASED MULTI-COUNTRY STUDY <i>Abdul Bashir Wadood Oghlo, Rubeena Bashir, Muhammad Luqman, and Ibrahim Alturki</i>	STR-68, APPLIED ELEMENT ANALYSIS OF BLAST RESILIENCE AND PROGRESSIVE COLLAPSE OF FRP-STRENGTHENED RC BUILDING FRAMES <i>Faisal Mukhtar, Mohammed Shehadah, and C. Armando Duarte</i>	
15:00 - 15:15				



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Closing Session		
15:15 - 16:15	Award Ceremony for Best Papers	Room P2
	Announcements	
	Group Photo	
	Closing	
Wednesday – September 9, 2026		
18:15 - 00:00	Dinner Banquet: Esperia Torino Price: US\$ 150 Meeting Point: Politecnico Main Entrance Includes: Bus Transportation, Dinner, Live Music	
Thursday – September 10, 2026		
8:30 – 17:00	Technical Tour: The Sanctuary of Vicoforte Price: US\$ 75 Meeting Point: Politecnico Main Entrance Includes: Bus Transportation, Lunch	
Friday – September 11, 2026		
8:45 – 13:00	Cultural Tour: The Reggia di Venaria Reale and its Gardens Price: US\$ 55 Meeting Point: Porta Susa Train (8:45) – Entrance A. – Corso Bolzano Street. Includes: Train Transportation (departure at 9:27)	 

Keynote Speakers

Keynote Speaker I



Alessandro Carbonari

Full Professor
DICEA, Università Politecnica delle Marche

Title: ***From Data to Decisions: Cyber-Physical Systems and Agentic Approach for the Built Environment***

Tuesday, September 8, 2026
9:50 - 10:20

The keynote explores integrated systems to support decision making in the complex construction domain. It presents the integration of BIM, IoT sensing, Digital Twins, agentic solutions and advanced technologies for human-machine cooperation to enable the control of dynamic processes across the construction life-cycle, which requires scalable systems for interoperable, proactive and data-driven management. It presents applications to construction safety, management of complex facilities and building renovation actions, construction production systems, and illustrates the transition towards safer, more efficient, resilient and sustainable construction processes.

Keynote Speaker II



Giuseppe Carlo Marano

Full Professor
ArtIStE, Politecnico di Torino

Title: ***Advances of Artificial Intelligence in Structural and Building Engineering***

Wednesday, September 9, 2026
8:50 - 9:20

The keynote presents recent advances in Artificial Intelligence and their transformative potential in structural and building engineering. It focuses on machine learning, computational intelligence and AI assisted optimization for structural analysis, form finding and performance driven design. Applications to Structural Health Monitoring, Digital Twins, data driven modelling and intelligent management of structures and infrastructures are also addressed. The lecture highlights how the integration of mechanics, engineering knowledge and AI is reshaping the design of safer, smarter, more resilient and sustainable structures.

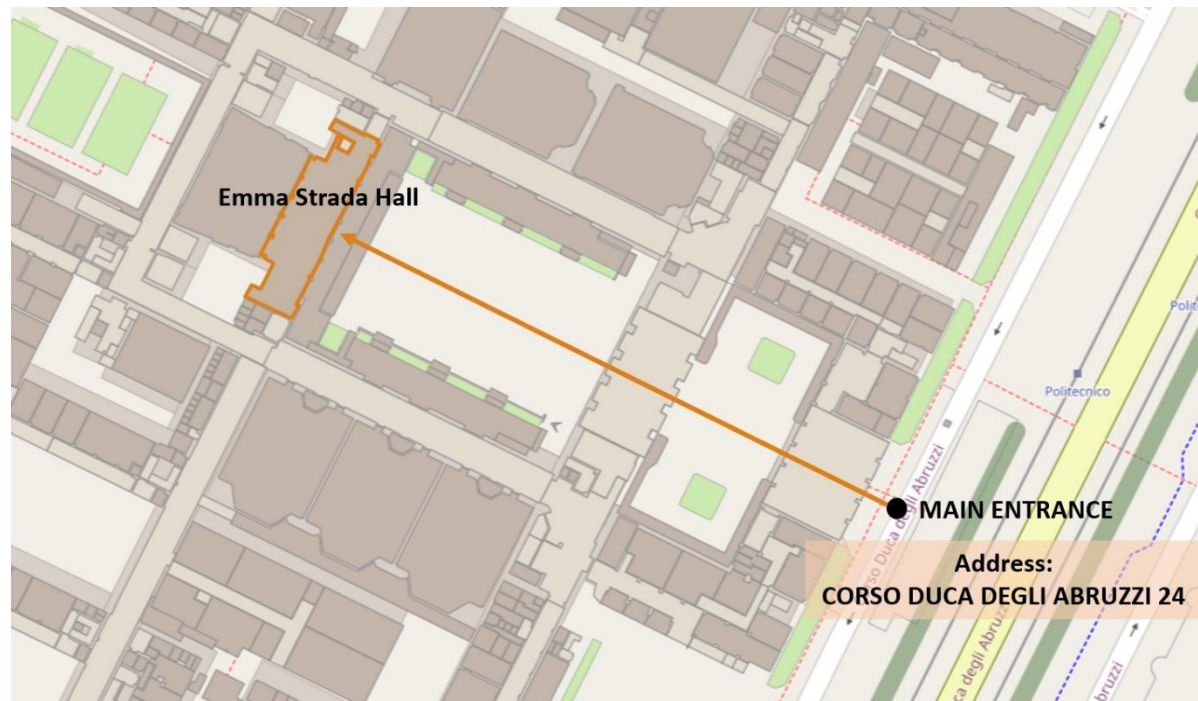
Wayfinding Map

Emma Strada Hall

Starting from the Main Entrance, follow the orange route through the central building. Emma Strada Hall is on the ground floor.

Starting Point: Politecnico di Torino - Main Entrance

Address: Corso Duca degli Abruzzi, 24, 10129 Torino TO



Wayfinding Map

P Classrooms

Starting from Corso Castelfidardo 44, follow the orange route. P Classroom are located outside the main historical building, on the ground floor.

Starting Point: Corso Castelfidardo 44

Address: Corso Castelfidardo, 44, 10129 Torino TO



Wayfinding Map

P Classrooms (Alternative route)

The P Classrooms can also be reached from the Main Entrance (Corso Duca degli Abruzzi 24) by following the orange route.





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Notes
