



IABSE Congress MILAN 2027

1-3 September, 2027

*Shaping the Future of Structural Engineering
Human-Centred Design, Sustainability and Innovation*

PRELIMINARY INVITATION AND CALL FOR ABSTRACT

www.iabse.org/Milan2027



The International Association for Bridge and Structural Engineering (IABSE) is a scientific/technical association with members in over 100 countries and 58 National Groups worldwide. Founded in 1929, IABSE is a non-profit organisation headquartered in Zurich, Switzerland. The current President (2025-2028) is Dr. Harshavardhan Subbarao from India.

IABSE covers all aspects of structural engineering: the science and art of planning, design, construction, operation, monitoring and inspection, maintenance, rehabilitation and preservation, demolition and dismantling of structures.

Its scope considers not only technical and economic factors but also environmental, aesthetic, and social dimensions.

The term 'structures' encompasses bridges, buildings, and all types of civil engineering structures made from any structural material.

Jungholzstrasse 28
8050 Zurich
Switzerland



Messages from the President of IABSE

Dear Colleagues,

It is my great pleasure, as President of the International Association for Bridge and Structural Engineering (IABSE), to warmly invite you to participate in the IABSE Congress 2027 to be held in Milan, Italy, from 1–3 September 2027.

This Congress, held under the theme “*Shaping the Future of Structural Engineering: Human-Centred Design, Sustainability and Innovation*”, comes at a pivotal time for our profession. Structural engineering

today is undergoing a profound transformation, driven by the need to address climate change, rapid urbanisation, resilience against natural hazards, and the integration of digital technologies into every stage of the infrastructure lifecycle.

The theme of the Congress reflects a holistic and forward-looking vision for our profession. It emphasises the importance of placing people at the centre of engineering design, ensuring that infrastructure is safe, inclusive, adaptable, and responsive to societal needs. At the same time, sustainability must guide every phase of the life cycle—from conceptual design to construction, operation, maintenance, and eventual reuse—minimising environmental impacts while maximising long-term value. The Congress will also highlight the role of innovation, including digitalisation, artificial intelligence, advanced materials, and smart infrastructure systems, in transforming how we design, build, and manage structures. Together, these dimensions define the pathway towards resilient, efficient, and future-ready infrastructure systems.

Milan, a global centre of design, architecture and innovation, provides an inspiring setting for this important gathering. Italy’s rich heritage of engineering excellence, combined with its experience in addressing seismic risks, climate challenges, and preservation of historic infrastructure, offers valuable lessons for the global engineering community.

The Congress will serve as a premier international forum bringing together engineers, researchers, academics, infrastructure owners, and policymakers to exchange knowledge and share best practices. Through keynote lectures, technical sessions, special sessions and networking opportunities, participants will engage in meaningful dialogue on emerging challenges and innovative solutions shaping the built environment.

The technical programme will cover a broad spectrum of topics, including structural safety and reliability, resilience and risk mitigation, sustainability and circular construction, digitalisation, artificial intelligence, structural health monitoring, and the design and management of complex infrastructure systems. These themes reflect IABSE's mission to advance structural engineering practice while addressing technical, environmental, social, and economic dimensions.

At the heart of this Congress lies a shared vision: to place people at the centre of engineering solutions, to minimise environmental impact, and to harness innovation for the benefit of society. Human-centred design calls upon us to create infrastructure that is not only safe and efficient, but also inclusive, adaptable, and responsive to the evolving needs of communities. The Congress will also feature a Young Engineers Programme and dedicated Networking Sessions, and aims to attract students, professional engineers, academic institutions, and industry leaders to strengthen international collaboration and foster meaningful partnerships across the global structural engineering community.

I warmly encourage you to contribute to this Congress by submitting abstracts, proposing special sessions, and actively participating in the discussions. Your expertise and engagement are vital in advancing our profession and addressing the global challenges we face.

I look forward to welcoming you to Milan for what promises to be an enriching and inspiring Congress.

Dr. Harshavardhan Subbarao
President, IABSE

**Message from the Co-Chairs of the Scientific Committee
Prof. Maria Pina Limongelli and Dr. Fabrizio Palmisano
and from the Co-Chairs of the Organising Committee
Prof. Tommaso Argentini and Dr. Pier Francesco Giordano**

The Italian National Group of IABSE, together with the Scientific and Organising Committees, is pleased to invite you to the IABSE Congress Milan 2027, to be held at Politecnico di Milano from 1 to 3 September 2027 under the theme “**Shaping the Future of Structural Engineering: Human-Centred Design, Sustainability and Innovation**”.

Italy is characterised by a diversity of landscapes, cultures and historical traditions. From the Alpine region to the Mediterranean coastline, climatic and geographical conditions vary significantly, shaping different architectural and infrastructural responses over the centuries. Italy has long been exposed to natural hazards such as earthquakes, floods, landslides, and, increasingly, extreme weather events linked to climate change. Learning from past experiences and recent challenges, engineers and researchers have continuously advanced structural design practices to enhance safety, resilience, and durability in both new and existing infrastructure.

Today, structural engineering stands at a decisive moment of transformation. The need to place people at the centre of design, to ensure environmental responsibility and to embrace the opportunities of digital innovation is reshaping the profession of engineering. Human-centred design calls for structures and infrastructure systems that are not only safe and efficient, but also inclusive, adaptable, and responsive to the evolving needs of communities. At the same time, sustainability must guide every phase of the life cycle—from conceptual design to



construction, maintenance, and eventual reuse—minimising environmental impacts while maximising long-term value.

The main goal of the Congress is to create a dynamic forum for discussion on “*Shaping the Future of Structural Engineering: Human-Centred Design, Sustainability and Innovation*”. Structural engineering offers numerous pathways towards this shared vision. The development of green and adaptive infrastructure, renewable energy facilities, low-carbon and circular construction strategies, and the use of innovative materials such as timber and advanced composites all contribute to reducing environmental impact. Equally important are resilient structural solutions to withstand seismic and climate-related hazards, ensuring safety and continuity of service. Digital technologies—including advanced computational modelling, artificial intelligence, parametric design, digital twins, and structural health monitoring—are transforming how structures are conceived, built, and managed. These tools are redefining engineering practice, enabling more informed decisions, optimised designs, and smarter, more sustainable infrastructure systems.

The Congress will focus on the defining challenges and opportunities of our time and the evolving role of structural engineers in addressing them. It aims to serve as a platform for students, professional engineers, academic institutions and industry leaders to strengthen international collaboration and foster meaningful partnerships that will shape the next generation of structural engineering practice.

In addition to the discussions at the Congress itself, participants will enjoy the vibrant atmosphere of Milan. As Italy’s capital of design and innovation, Milan combines historical heritage with contemporary architecture. Visitors can explore iconic landmarks such as the Duomo di Milano, the Castello Sforzesco, and the world-renowned Teatro alla Scala. The city is exceptionally well connected through international airports and high-speed rail networks, making it easily accessible from across Europe and the world.

We will do our utmost to make IABSE Milan a stimulating and rewarding event for all participants. We are confident that you will find both the technical programme and the unique setting of Milan inspiring, and we look forward to welcoming you to Italy.



Prof. Maria Pina Limongelli



Dr. Fabrizio Palmisano

Scientific Committee Co-Chairs



Prof. Tommaso Argentini

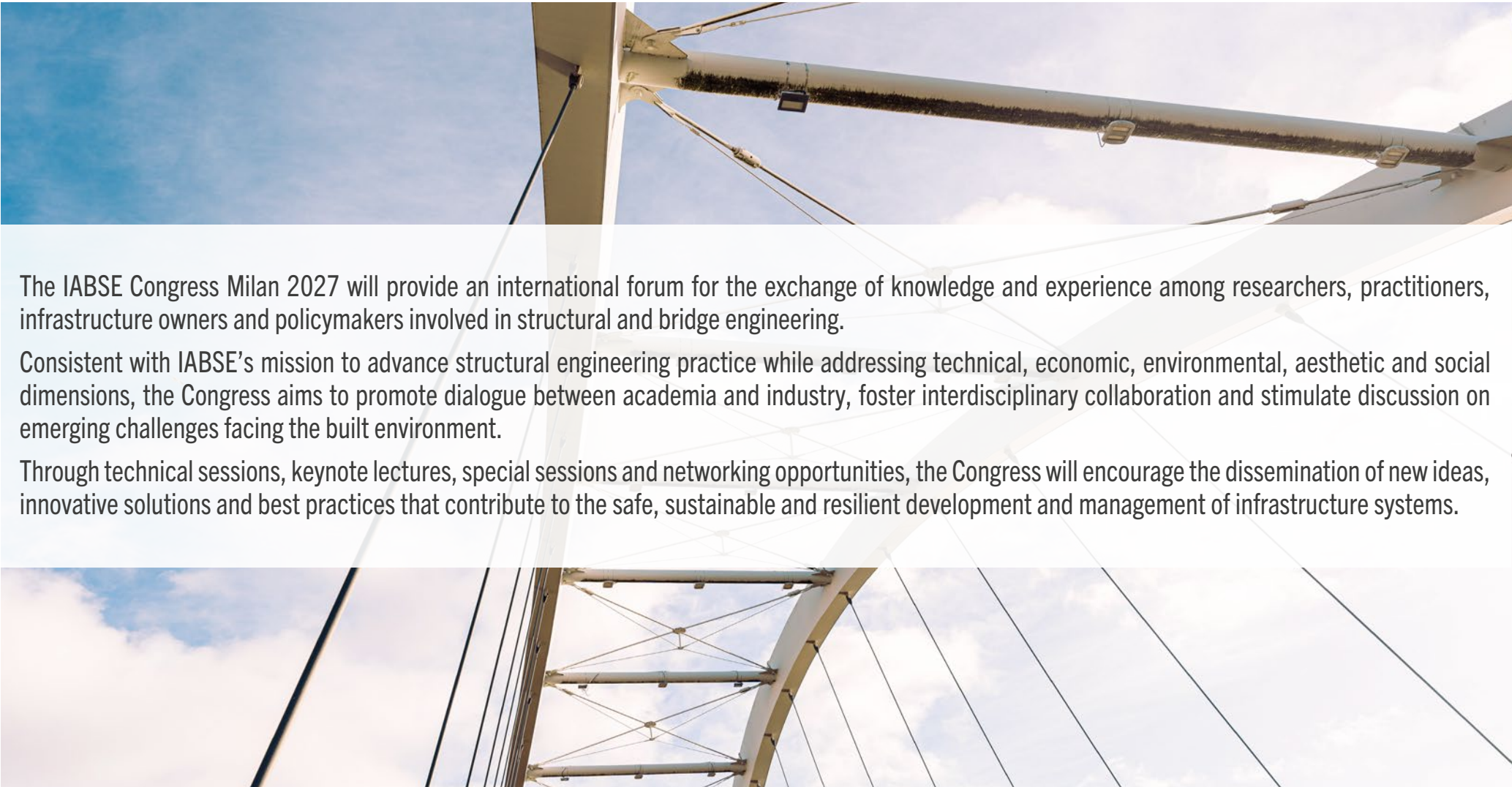


Dr. Pier Francesco Giordano

Organising Committee Co-Chairs



Objective and Scope



The IABSE Congress Milan 2027 will provide an international forum for the exchange of knowledge and experience among researchers, practitioners, infrastructure owners and policymakers involved in structural and bridge engineering.

Consistent with IABSE's mission to advance structural engineering practice while addressing technical, economic, environmental, aesthetic and social dimensions, the Congress aims to promote dialogue between academia and industry, foster interdisciplinary collaboration and stimulate discussion on emerging challenges facing the built environment.

Through technical sessions, keynote lectures, special sessions and networking opportunities, the Congress will encourage the dissemination of new ideas, innovative solutions and best practices that contribute to the safe, sustainable and resilient development and management of infrastructure systems.

Format and Attendance



Congress Format

The scientific programme will span three days and will include keynote lectures, plenary sessions and parallel technical sessions, including approved Special Sessions.

The technical programme will primarily consist of peer-reviewed contributions selected through the abstract submission process, followed by full paper submission. Accepted contributions will be presented in parallel technical sessions, which will be organised according to the general topics of the Congress and may include Special Sessions dedicated to focused and emerging themes proposed by experts and approved by the Scientific Committee.

The general topics will provide a broad framework for contributions across the full scope of structural and bridge engineering, while Special Sessions will offer focused opportunities for discussion on specific research and practice-oriented themes of high relevance to the IABSE community.

In addition to the scientific programme, the Congress will include keynote lectures delivered by internationally recognised experts, as well as opportunities for professional exchange and networking. An industry exhibition will run alongside the programme, featuring exhibitors presenting advanced technologies, materials, services and solutions for structural engineering and infrastructure management. The Congress will also include technical visits and social events, offering participants the opportunity to explore notable engineering works and strengthen professional connections.



Who should attend

The Congress is intended for engineers, designers, contractors, infrastructure owners, developers, policymakers, researchers, scientists and students, as well as professionals from industry and public institutions interested in advances and challenges in structural and bridge engineering. The event will provide a valuable opportunity to exchange experiences, share expertise and discuss emerging challenges related to the design, assessment, monitoring and management of structures and infrastructure systems in a rapidly evolving technological and environmental context.



Scientific Committee

Prof. Maria Pina Limongelli
Dr. Fabrizio Palmisano



Organising Committee

Prof. Tommaso Argentini
Dr. Pier Francesco Giordano



Themes, Topics & Special Sessions

The technical programme of the Congress will address a broad range of topics related to the design, analysis, assessment, monitoring, construction, maintenance and management of structures and infrastructure systems. These topics define the broad thematic framework of the Congress.

In addition, the programme will include Special Sessions dedicated to focused, emerging or strategic topics proposed by experts and approved by the Scientific Committee. Special Sessions will provide opportunities for targeted discussion on specific research and practice-oriented themes of particular relevance to the IABSE community and beyond. The final activation of each Special Session will depend on the number and quality of abstracts received.

General topics

G1 *Structural Safety, Performance and Design*

- G1.1 Safety and reliability of structures
- G1.2 Serviceability of structures
- G1.3 Structural analysis, design and optimisation
- G1.4 Structural dynamics and performance-based engineering

G2 *Structural engineering under extreme and environmental actions*

- G2.1 Seismic engineering
- G2.2 Wind engineering
- G2.3 Fire engineering
- G2.4 Extreme loads and conditions
- G2.5 Climate change

G3 *Geotechnical engineering*

- G3.1 Geomaterial Characterisation, Site Investigation and Ground Improvement
- G3.2 Soil-structure interaction
- G3.3 Geotechnics and the Environment
- G3.4 Biogeotechnics
- G3.5 Geotechnical Earthquake Engineering

G4 *Existing structures*

- G4.1 Assessment of existing structures
- G4.2 Deterioration
- G4.3 Structural health monitoring
- G4.4 Maintenance and intervention on existing structures
- G4.5 Forensic structural engineering

G5 *Sustainable Construction and Asset Life-Cycle Management*

- G5.1 Sustainability, circularity and carbon reduction in the built environment
- G5.2 Construction materials and methods
- G5.3 Life cycle performance and management
- G5.4 Project and construction management

G6 *Digital Transformation in Structural Engineering*

- G6.1 Artificial intelligence in structural engineering
- G6.2 Digital technologies, automation and parametric design in structural engineering
- G6.3 Building Information Modelling

G7 *Professional Practice, Standards and Education*

- G7.1 Codes, standards and guidelines
- G7.2 Education in structural engineering
- G7.3 Structural engineering and architecture integration
- G7.4 Case studies

Special Sessions

The tentative list of Special Sessions is as follows:

- | | |
|---|--|
| SS1 Remote Bridge Inspection: from Advanced Sensing to Reliability Assessment | SS14 A Preliminary Study on Pre-Engineered Reciprocal Framework in Long- Span Structures |
| SS2 Steel and steel concrete composite bridges in Italy: new realizations, innovative features and trends. | SS15 Resource-Efficient Composite Structures for Sustainable and Circular Construction |
| SS3 From Sketch to BIM: Preserving Conceptual Structural Thinking in the Digital Era | SS16 Life extension of bridge fittings and equipments |
| SS4 Bridge Collapses and Failures | SS17 Cable replacement : a global trend for ageing infrastructures & technologies |
| SS5 Next Generation Long and Super Long Span Bridges: Design, Construction, Control, Monitoring and Smart Management | SS18 Seismic Resilience of Precast Industrial Buildings: Design, Assessment, and Retrofitting |
| SS6 Digitalization of Bridge Integrity Management | SS19 Corrosion and Fatigue in Steel Bridges: Monitoring, Assessment and Rehabilitation |
| SS7 From Bridge Information Models to Digital Twins for Data-Driven Maintenance | SS20 Bridging Complexity: Integrated Engineering, Urban Transformation and Sustainable Mobility in the Drammen City Bridge |
| SS8 Footbridge design and assessment: safety, durability and human-induced vibrations | SS21 Strategies to Extend the Design Life of Existing Structures: Durable Key Components, Seismic Retrofitting, and Optimised Replacement Concepts |
| SS9 Satellite Monitoring of Built Environment | SS22 Emerging sensing technologies and intelligent infrastructure monitoring |
| SS10 Augmenting Human Intelligence in Structural Engineering through Artificial Intelligence | SS23 GFRP Reinforcement for Resilient Infrastructure: Bridging North American and European Approaches toward Global Qualification, Design and Market Adoption |
| SS11 Seismic Rehabilitation of Existing Bridges: Advanced Retrofit Strategies for Resilience and Serviceability | SS24 Innovative Seismic Retrofit Strategies for Existing Bridges: From Research to Engineering Practice |
| SS12 Recent Developments in the Assessment of Wind Effects on Long-Span Bridges | |
| SS13 Between Reliability-Driven and Nonlinear Approaches and the Infrastructure Assessment and Management Practice – where do we stand right now, and what to do next? | |

Special Sessions

- SS25** Ponte Ferreira – Design and Construction of the World's Longest Frame Bridge, using high strength light weight concrete
- SS26** Structural Timber
- SS27** Open-Source Tools for Bridge Analysis, Design, Monitoring, and Management
- SS28** Zemun Polje – National Stadium railway viaduct
- SS29** Post-Tensioning Systems in Concrete Structures: assessment, monitoring and practical experiences
- SS30** Vulnerability and Structural Upgrade of Existing Structures
- SS31** Traffic Data in Bridge Assessment
- SS32** UHPFRC in Structural Engineering: From Material and Design Innovations to Code Standardisation
- SS33** Intervening on Existing Bridges: Time for a New Paradigm
- SS34** Proactive Structural Resilience: Integrating Digital Technologies and Multi-Hazard Adaptability for Infrastructure Disaster Preparedness
- SS35** Advances in digital condition assessment of infrastructure through image-based structural inspection
- SS36** Digital Twin Technologies for Predictive Maintenance and Multi-risk Assessment of Existing Bridges and Infrastructure
- SS37** Innovative Structural Multifunctional Materials for Energy-Efficient and Smart Constructions
- SS38** Reuse and Circularity in Infrastructure and Buildings
- SS39** Existing Buildings First: Assessment, Adaptation and Reuse for a Sustainable Built Environment
- SS40** Timber and Hybrid Structures for a Sustainable and Resilient Built Environment
- SS41** Structural Health Monitoring of Bridges: From Research to Practice
- SS42** Calibration of Partial Safety Factors for the Assessment of Existing Bridges
- SS43** Utilization of Traffic Data in Research, Design, and Assessment of Bridges
- SS44** Effects of Climate Change on Infrastructures
- SS45** Carbon Footprint of Bridge and Infrastructure Construction Projects
- SS46** Optical Fiber Networks for Structural and Post-Earthquake Assessment
- SS47** Resilience and Recovery of Existing Structures: From Disruption and Downtime to Resilience Affordability
- SS48** Long Viaducts Built by the Balanced Cantilever Method – The Case of the Viaduct over Oued Sakia El Hamra, Morocco
- SS49** Moving Bridges – Design, Construction, Maintenance and Operation

The final activation of Special Sessions will depend on the number and quality of abstracts received.



Call for Abstract

The Scientific and Organising Committees of the IABSE Congress Milan 2027 invite authors to submit abstracts for consideration in the technical programme of the Congress.

Authors are invited to contribute original work addressing the Congress theme “*Shaping the Future of Structural Engineering: Human-Centred Design, Sustainability and Innovation*” and the topics listed above. Contributions may present scientific advances, practical applications, case studies, innovative design solutions, monitoring and assessment methods, digital tools, sustainability-oriented approaches, or interdisciplinary perspectives relevant to structural and bridge engineering.

Abstracts may be submitted under one of the **general topics** of the Congress or to one of the approved **Special Sessions**. The general topics cover the broad themes of the Congress and will be used to classify contributions within the regular parallel technical sessions, while Special Sessions will address focused topics selected through the dedicated Call for Special Sessions. During submission, authors will be invited to indicate the most appropriate topic or Special Session for their contribution. The Scientific Committee will review all abstracts and assign accepted contributions to the most suitable part of the programme.

Abstract submissions should clearly describe the objectives, methodology, main results or expected outcomes, and relevance of the contribution to the Congress theme and topics.

We look forward to receiving your contributions and to welcoming the international structural engineering community to Milan.

Authors must register for the Congress in order to present their papers and have them included in the Congress Proceedings. Each registration covers the presentation and publication of up to two papers.

The deadline for abstract submission is:
15 September 2026

Extended **30 September 2026**

Abstracts must be submitted through the online submission system available on the Congress website:

www.iabse.org/Milan2027



Authors of accepted abstracts will be notified by:
31 October 2026

Following abstract acceptance, authors will be invited to submit a full paper by:
1 February 2027



Important Dates



1 April 2026	Call for Special Session
15 May 2026 Extended 30 May 2026	Deadline for Special Session submission
1 June 2026	Call for Abstracts
15 September 2026 Extended 30 September 2026	Deadline for Abstract Submission
31 October 2026	Notification of Abstract Acceptance
1 February 2027	Submission Deadline for Full Papers
1 March 2027	Registration Opens
15 April 2027	Notification of Full Paper Acceptance
15 May 2027	Registration Deadline for All Presenting Authors & Early Bird Registration
30-31 August 2027	IABSE Annual Meetings and Pre-Congress Workshops
1-3 September 2027	IABSE Congress Milan

General Info



Congress Proceedings

Full papers accepted by the Scientific Committee will be published in the IABSE Congress Proceedings, which will be distributed in electronic format to Congress participants. The Proceedings will follow the IABSE publication process for conference proceedings indexed in Scopus and other major scientific databases. Authors must register for the Congress in order to have their papers presented and included in the Proceedings.



Young Engineers Programme

Delegates born in 1993 or later are eligible for reduced registration fees. Furthermore, the Outstanding Contribution Award will be given to two young authors, born in 1993 or later, who present their papers in person during the Congress.



Annual Meetings and Pre-congress Workshops

IABSE will hold its Annual Meetings on 30 and 31 August. These meetings will bring together IABSE's Administrative, Executive, Technical, and Permanent Committees, as well as various commissions, task groups and editorial boards.

On the same dates, some workshops and short courses will be held. These will cover relevant topics in structural engineering and will be tailored to equip participants with both theoretical understanding and practical skills, enabling them to thrive in their careers and navigate the complexities of the profession with confidence and awareness.



Event Language

The official language of the Congress, including sessions, technical visits and pre-congress workshops, will be English.



Congress Venue



With over 160 years of history, the Politecnico di Milano is a world-renowned institution where Italian engineering tradition meets pioneering research and avant-garde design.

The Congress will be hosted at Politecnico di Milano, in the historic “Trifoglio” building, envisioned by Gio Ponti and recently renovated as part of the university campus redevelopment led by Renzo Piano.

Patronages & Endorsements

The Scientific and Organising Committees of the IABSE Congress Milan 2027 gratefully acknowledge the valuable patronage, endorsement, and institutional support granted by public authorities, academic bodies, and professional associations.

AGI Associazione
Geotecnica
Italiana



**International Council
for Research and Innovation
in Building and Construction**



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