IABSE YEC TOKYO Final Programme

May 18, 2025

Waseda University

IABSE
International Association for Bridge and Structural Engineering

Symposium Tokyo 2025

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International Association for Bridge and Structural Engineering

1. Objective

The primary objective of this colloquium is to help young structural engineers (under the age of 40) make friends, learn from each other, and develop their professional career together. It aims to offer a platform to present their researches, projects, and innovative design ideas. The event is organized by the IABSE National Groups of Japan, China, Korea, Hong Kong and Germany and we welcome young engineers in the world.

2. Organization

Organizing Committee

Chairs

Shunichi Nakamura (Tokai University), Yozo Fujino (Josai University), Mitsuyoshi Akiyama (Waseda University), Toru Takeuchi (Institute of Tokyo Science), Limin Sun (Tongji University), Yaojun Ge (Tongji University), Ho-Kyung Kim (Seoul National University), Na Ullah Hussain (Ove Arup & Partners), Geralt Siebert (University of the Bundeswehr Munich)

Secretaries

Yukari Aoki (Akita University), Wonsuk Park (Mokpo National University), Mingming Song (Tongji University), Paresh Vishnoi (Ove Arup & Partners), Geralt Siebert (University of the Bundeswehr Munich)

Members

Shuichi Fujikura (Utsunomiya University), Yusuke Kurihashi (Kanazawa University), Eiichi Sasaki (Institute of Tokyo Science), Takashi Yamaguchi (Osaka Metropolitan University), Hiroshi Tamura (Yokohama National University), Xingchen Chen (Hiroshima University), Manabu Inoue (IHI Infrastructure), Ikuhide Shibata (Ove Arup & Partners), Sunglak Choi (ENVICO Consultants Co., Ltd), Deng Qinger (Tongji Architectural Design Ltd), Ricardo Ferraz (Ove Arup & Partners), Peter Seitz (Herm-Consult GmbH & Co. KG)

Core Student Members

Tomoki Yamashita (Waseda University), Jumpei Shibuta (Waseda University), Manato Shibata (Akita University), Kyosuke Minakawa (Akita University), Reika Itani (Kanazawa University), Chisaki Yoshimoto (Kanazawa University)

Design Competition Committee

Chair

Shuichi Fujikura (Utsunomiya University)

Members

Yusuke Kurihashi (Kanazawa University), Yukari Aoki (Akita University), Manabu Inoue (IHI Infrastructure Systems Co., Ltd), Ikuhide Shibata (Ove Arup & Partners), Deng Qinger (Tongji Architectural Design Ltd), Sunglak Choi (ENVICO Consultants Co., Ltd), Ricardo Ferraz (Ove Arup & Partners), Peter Seitz (Herm-Consult GmbH & Co. KG), Tina Vejrum (COWI)

Technical Session Committee

Chair

Hiroshi Tamura
(Yokohama National University)

Members

Tomonori Nagayama (University of Tokyo), Takashi Yamaguchi (Osaka Metropolitan University), Eiichi Sasaki (Institute of Tokyo Science), Masaru Kitahara (Hokkaido University), Yukari Aoki (Akita University), Xingchen Chen (Hiroshima University), Mingming Song (Tongji University), Wonsuk Park (Mokpo National University), Paresh Vishnoi (Ove Arup & Partners), Geralt Siebert (University of the Bundeswehr Munich)

3. Basic Information

Date : May 18, 2025
Venue : International Conference Center, Waseda University

Map

Before 8:00

The campus gates do not open before 8:00 AM. If you are arriving earlier, please use **Route A (green)** to reach the venue.

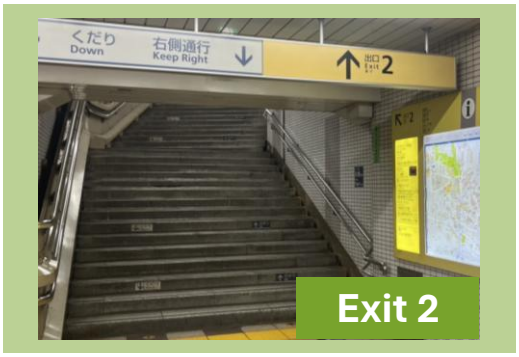
After 8:00

The campus gates will open at 8:00. The most direct way to the venue is **Route B (blue)**, which passes through the university campus.

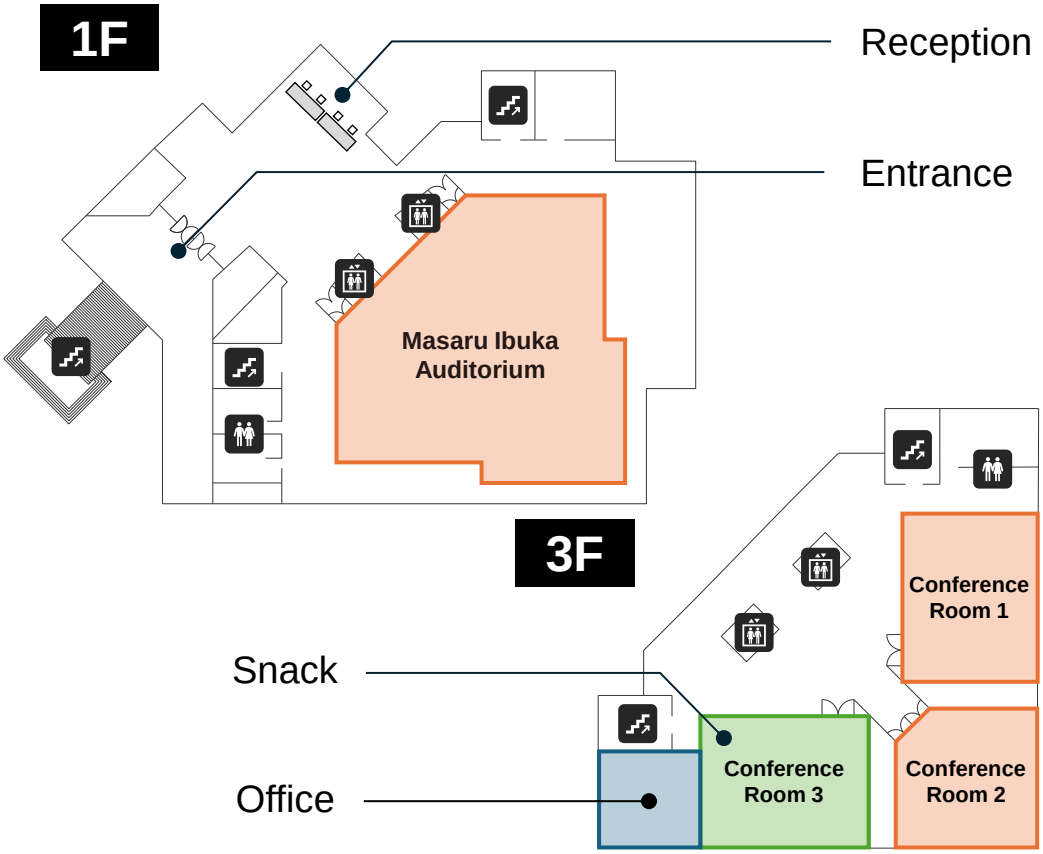
3. Basic Information

Transport Access

Nearest Station: Waseda Station (T04), Tokyo Metro Tozai Line.
Please use **Exit 2** or **3b** of Waseda Station.



Floor Map



Food and drinks are allowed only in the 3F Conference Rooms.

4. Schedule

The IABSE YEC will proceed according to the following schedule.

	Masaru Ibuka Auditorium	Conference Room 1	Conference Room 2	Conference Room 3	1F Lobby
8:10-8:40	—	—	—	Snack*1	Registration*2
8:40-9:05	Opening Ceremony & Group Photo	—	—	—	—
9:15-10:40	Design Competition Session 1	Technical Session 1	Technical Session 2	—	—
10:55-12:20	Design Competition Session 2	Technical Session 3	Technical Session 4	—	—
12:35-13:20	—	Lunch (Networking Session)	—	Lunch (Networking Session)	—
13:30-14:55	Design Competition Session 3	Technical Session 5	Technical Session 6	—	—
15:10-16:35	Technical Session 7	Technical Session 8	Technical Session 9	—	—
16:45-17:35	Mentoring Session	—	—	—	—
17:35-18:05	Closing Ceremony	—	—	—	—
18:20-19:30	—	—	—	Buffet Dinner	—

*1 Snacks are available from 8:00 to 16:30.

*2 Registration desk will be relocated to Conference Room 3 after 10:00.

5. Presentation Schedule

Explanatory note

Design Competition Session | Technical Session

	Masaru Ibuka Auditorium	Conference Room 1	Conference Room 2
	Design Competition Session 1	**Technical Session 1**	**Technical Session 2**
9:15 | 10:40	**9:15-9:28** **BauhauSis** The GreenLink Bridge	**9:15-9:25** **Chisaki Yoshimoto** Experimental Study on Load Carrying Capacity of RC Beams Shear Strengthened with Thermoplastic CFRP Sheets	**9:15-9:25** **Kippu Ito** CO2-Sequestrated Magnesium-Based Cement Binder for Producing Low-Carbon Concrete: An Exploratory Study
	9:28-9:41 **UU&DUT Team** Trinity Ring Bridge inspired by “WA-modern”	**9:25-9:35** **Sheng Yu Qian** Design Methodology for Fire-Resistant and Thermal-Insulating Layers of Bridge Stay Cables Under Vehicle-Induced Fire Scenarios	**9:25-9:35** **Qian Ke Zhang** Design of the Xishamen Sea-Crossing Bridge
	9:41-9:54 **ASRL** Shibuya Flow: Seamless Pedestrian Experience	**9:35-9:45** **Tsukasa Tokue** Damage Analysis of the Steel Deck Arch Bridge damaged by the 2024 Noto Peninsula Earthquake	**9:35-9:45** **Miao Xu** Nonlinear Modelling for Temperature Response of Bridges Incorporating Time Lag Effects
	9:54-10:07 **Team DNE** Shibuya Botanical Deck	**9:45-9:55** **Omid Yazdanpanah** Deep Learning-Based Seismic Response Prediction and Visible Damage Segmentation for Bridge Piers	**9:45-9:55** **Ki-Yeol Kim** Visualization of damage information integrated with repair records
	10:07-10:20 **Smart Prefab** Breathing Islands of Shibuya: A Sky Garden Above the Crossing	**9:55-10:05** **Jingyao Jia** Stochastic Subspace Identification and EM-based Bayesian modal analysis for Donghai Bridge	**9:55-10:05** **Hiroki Yamamoto** Study on methods for chain collapse analysis of arch bridges considering out-of-plane buckling
		10:05-10:15 **Rena Horiguchi** A probabilistic simulation of pedestrian vehicle integrated tsunami evacuations considering the effects of ground motion and liquefaction induced bridge damages on the network connectivity	**10:05-10:15** **Zhou Peng** Joint wind and wave loads estimation of offshore wind turbine based on Gaussian process latent force model
		10:15-10:25 **Jia Xu Tan** Negative stiffness friction damper for vibration control of flexible structures	**10:15-10:25** **Dorina Siebert** Crack Growth Analysis in Railway Bridges: A Comparison of Load Models and Traffic Compositions

5. Presentation Schedule

Explanatory note

Design Competition Session | Technical Session

	Masaru Ibuka Auditorium	Conference Room 1	Conference Room 2
	Design Competition Session 2	**Technical Session 3**	**Technical Session 4**
10:55 | 12:20	**10:55-11:08** **IHI and Akita University** Cable Supported Shibuya Pedestrian Bridge Design Concept	**10:55-11:05** **Hyeogn-Yun Cheon** Accident Criteria Reestablishment for Vehicles on Long-Span Bridges under Strong Wind, Heavy Rain, and Water Film Conditions	**10:55-11:05** **Reika Itani** Effect of stirrup arrangement on fracture behavior of RC beams with non-contact lap splice joint
	11:08-11:21 **UTokyoteam2** Tamago bridge -- Pedestrian bridge with egg-shaped deck and white roof --	**11:05-11:15** **Minte Zhang** Damage identification of long-span bridge expansion joints using monitored data and deep generative network	**11:05-11:15** **Takuto Tsuji** Fundamental study of Timber-filled I steel girder
	11:21-11:34 **Team Slow Walkers** Shibuya Green Ring	**11:15-11:25** **Himeri Kaneta** Risk Assessment and Management for A Cable-Stayed Bridge in Japan	**11:15-11:25** **Li Shu li** Experimental and numerical studies on the behavior of single-box multi-cell box-girders with corrugated steel webs under pure torsion
	11:34-11:47 **HMT** Fram of tide	**11:25-11:35** **Seima Chiyooka** Investigation of reproduction of partial corrosion model of cable in suspended structure	**11:25-11:35** **Hirofumi Yanagi** Main Cable Construction of Suspension Bridge in Romania -Braila Bridge-
	11:47-12:00 **Bridge the gap** The living link: A walk through nature	**11:35-11:45** **Zhouhui Shen** Ensemble Learning-based Lightweight Acoustic Approach for Void Detection in Concrete-filled Steel Tubular Arch Bridges	**11:35-11:45** **Cheng Pan** U-Net-Driven Method for Identifying Vehicle Moving Forces from Bridge Displacement Data
		11:45-11:55 **Hui Xu** The Research on the Interaction of Coastal Multi-branched Flexible Vegetation with Regular waves in Submerged Environment	**11:45-11:55** **Jielong Wan** Design of the footbridge across Shuangjie River
		11:55-12:05 **Shunta Inagaki** Understanding the relationship between corrosion products and corrosion crack widths in PC members	**11:55-12:05** **Zheng Hu** Acoustic Signal Analysis in Bridge Territory for Traffic and Collision Identification

5. Presentation Schedule

Explanatory note

Design Competition Session　　Technical Session

	Masaru Ibuka Auditorium	Conference Room 1	Conference Room 2
	Design Competition Session 2	**Technical Session 5**	**Technical Session 6**
13:30 | 14:55	**13:30-13:43** **Akita_university** Connecting bridge	**13:30-13:40** **Nikolai Kozak** Case studies of BIMization in the tasks of bridge inspection	**13:30-13:40** **Daixin Yang** Neural networks for modeling frequency and amplitude dependent behaviors of dampers with applications to cable vibration control
	13:43-13:56 **EverAfter** A Simple Pause：Connecting Calm in the City	**13:40-13:50** **Pei song** Intelligent Detection and Risk Identification of Structural Surface Diseases Based on UAV	**13:40-13:50** **Hironobu Morita** Application of Sorel Cement Containing CO2-sequestered Magnesium Carbonate as Concrete Fine Aggregates
	13:56-14:09 **Lightly Twinkle Engineers** Musubi bridge - 3 interconnected inclined arch curved bridges	**13:50-14:00** **Sanghyun Lee** Hierarchical circular economy assessment from a material-centred perspective: A case study of medium-span bridges	**13:50-14:00** **Lanxin Luo** Physics-encode Neural network for Joint Load-parameter-response Identification
	14:09-14:22 **Tongji University Bridge Design Team** Shibuya Crossing Pedestrian Bridge: Aesthetic and Sustainable Design	**14:00-14:10** **Ru Yue** Vibration Control and Optimization of Topological Metamaterial Plates	**14:00-14:10** **Ryosuke Kato** Shaking Table Tests of Rocking Vault-Shaped Segmental Pier with Annular Double Sliding System
		14:10-14:20 **Nilesh Shaligram Patil** Orthotropic Steel Deck (OSD) Bridges for Atal Setu, Mumbai, India	**14:10-14:20** **Jiaji Wang** Data-Driven Neural Operators for Digital Twins of Structures
		14:20-14:30 **Chenxi Wei** A physical-based damage localization method using acceleration transfer matrices	**14:20-14:30** **Siyi Mao** Dual-Objective Optimization for Circular Lifecycle Planning of Bridge Components: Balancing Economic Viability and Environmental Sustainability
		14:30-14:40 **Hikaru Fujita** Effect of Biaxial Stress State of Steel Members on Leeb Hardness Test Results	

5. Presentation Schedule

Explanatory note

Design Competition Session | Technical Session

	Masaru Ibuka Auditorium	Conference Room 1	Conference Room 2
	Technical Session 7	**Technical Session 8**	**Technical Session 9**
15:10 | 16:35	**15:10-15:20** **Naoko Takano** Life-cycle reliability assessment of green-grey infrastructure: Forested slopes and sabo dams for rainfall under climate change	**15:10-15:20** **Marcel von Butler-Helmrich** Load test at Maintal viaduct Gemünden: Stochastic parameter identification and model calibration	**15:10-15:20** **Tao Yu** A Machine Learning-Enhanced Method to Bridge Condition Evaluation considering Defect Prioritization
	15:20-15:30 **Shuai Zou** Temperature Field Simulation Method and Average Temperature Prediction on Main Cables of Suspension Bridges	**15:20-15:30** **Beatrix Sylvani Sitanggang** In-plane seismic performance assessment of masonry walls through optimized concrete block design	**15:20-15:30** **Yuhao Li** Study on Inducing and Controlling Accelerated Corrosion of Steel
	15:30-15:40 **Houda Laaroussi** Benchmarking GHG emissions for steel girder bridges	**15:30-15:40** **Naoki Nishikawa** Characteristics of a Lightweight self-propelled impact vibration equipment for Evaluating the Health of Road Bridge slabs	**15:30-15:40** **Zirui Ling** Preliminary Evaluation of Modal Parameters of Cable-stayed Bridges with Limited Known Information
	15:40-15:50 **Yoshichika Matsuyama** CO2 Emissions from Construction of New Steel Bridges based on Different General Structural Conditions	**15:40-15:50** **Takuma Kajiwara** Consistency study by simple experiment and analysis using cardboard for the development of multi-directional laminated members	**15:40-15:50** **Shaoshi Shen** Comparison of Bridge Deterioration Models based on Bridge Defect Data from Inspection Report
	15:50-16:00 **Jing Yu Lv** Enhancing the lateral performance of Chuan-dou timber frame infilled with vertical wood panels	**15:50-16:00** **Kil Ho Choi** Influence of Arrangement on the Dynamic Response of Modular Floating Structures by Numerical Analysis	**15:50-16:00** **Ashhad Zawar Khan** Deep learning based dynamic response prediction of vehicle bridge interaction system subjected to vehicular loadings
	16:00-16:10 **Shun Nakamura** Influence of cross-sectional geometry on the redundancy of deteriorated RC superstructures: Insights from loading tests and stochastic field simulations	**16:00-16:10** **Haoyuv Liu** Joint Input-State-Parameter Estimation Based on Gaussian Process Latent Force Model	**16:00-16:10** **Soomin Kim** Coupled Effects of Hydrodynamic and Aeroelastic Loads on a Floating Bridge
	16:10-16:20 **Elisa Vitolo** Numerical Simulation of the Rocking Response of Vault-shaped Piers with Double Sliding System under Bidirectional Seismic Loading		**16:10-16:20** **Ryoga Oura** Issues and Technical Measures in Widening Construction of A Single Main Girder

6. Presentation

Presentations for both the Design Competition and the Technical Paper will follow the rules outlined below. Please be sure to adhere to them strictly.

Gathering Time

Please make sure to arrive at the session room at least **10 minutes** before your presentation. The session chair will call each speaker to the front of the room and provide a brief introduction before the presentation begins.

Presentation Duration

Design Competition : 10 minutes for the speech + 2 minutes for Q&A.
Technical Paper : 7 minutes for the speech + 2 minutes for Q&A.

Time Management

The Session Chair will alert the speakers before the allotted time ends as a reminder.

Important Note

The use of personal laptops for presentations is not allowed. All sessions will be conducted using **on-site PCs** equipped with Windows 11, Microsoft Office Standard 2024, Adobe Acrobat Reader, and VLC Media Player. Available A/V equipment includes a projector, 16:9 screen, microphone, and laser pointer. Please note that connecting **USB devices to the on-site PCs is strictly prohibited**.

Poster Submission

Posters will also be displayed in the same as presentation hall; therefore, please submit your poster to the staff after the Opening Ceremony.

Award

Winners of the Design Competition and Technical Session will be recognized at the Closing Ceremony.
All participants are encouraged to attend. Prizes will be awarded.

7. Networking Session

Time : 12:35-13:20
Venue : Conference Room 1,3, 3F

Objective

The aim of this program is to support young engineers by providing technical knowledge and essential professional skills through guidance from senior engineers. The session encourages the transfer of knowledge, skills, and experience to promote their personal and professional growth.

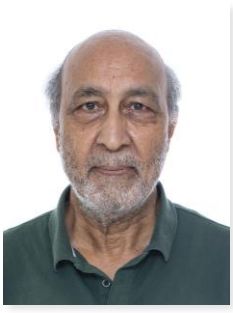
Method

This session will be held in a friendly atmosphere **during lunchtime.** Senior members will be available in the rooms, and a mentor will give a short presentation about their career journey with a personal touch and interact with the audience.

Senior Members


Manabu Inoue


Ho-Kyung Kim


Naeem Hussain


Tobia Zordan


Barbara Siebert


Yaojun Ge


Carlos Mendez-Galindo

You can read their **self-introduction** via the link below.

Networking Session.pdf

8. Mentoring Session

Time : 16:45-17:35
Venue : Masaru Ibuka Auditorium,1F

Objective

The aim of this program is to provide guidance to the young engineer, based on technical knowledge as well as hard and soft skills required in the profession, by a senior engineer. The session should facilitate a transfer of knowledge, skills, and experience which can help in the personal and professional growth of the young engineer. A mentor presents a short PPT about their career-journey with a personal touch and interacts with the present audience.

Mentor

Shunichi Nakamura
Emeritus Professor of Tokai University, Japan

He worked for a steel company as a structural engineer for 21 years. He was engaged in many bridge projects including the Akashi Kaikyo Bridge and the Tokyo Aqui-line Bridge. In his second career he became a professor and taught bridge engineering, structural analysis and structural dynamics. His career as an engineer and academia would be useful.

His **self-introduction** is available at link below.

Mentoring Session.pdf

9. Lunch

A lunch box will be provided in exchange for the meal ticket distributed at the registration desk.
If you submitted the dietary preference form that was emailed before the event **(e.g., halal, vegetarian or food allergies)**, a special ticket has been prepared for you.
Please make sure to inform the staff at the venue.

10. Buffet Party

Time : 18:20-19:30
Venue : Conference Room 3,3F

If you are attending the IABSE Symposium Tokyo 2025, please join the Welcome Reception Party at RIHGA Royal Hotel Tokyo starting at **18:30**, rather than the YEC Buffet Dinner.

11. Wi-Fi Information

SSID : waseda-event002
PASS : Wj9sfb5n

Connection Steps

1. Connect to the Wi-Fi using the SSID and Password above.
2. After connecting, the Cisco registration screen will open.
3. Follow the on-screen instructions to complete Registration.

Please scan QR code for more details.