

3rd ZHITU Symposium on Advances in Civil Engineering



SYMPOSIUM PROGRAM

THE UNIVERSITY OF TOKYO, JAPAN
AUGUST 20-22, 2023

HOST UNIVERSITY

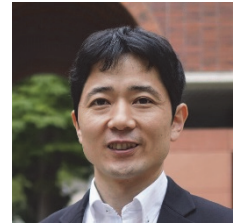
The University of Tokyo

ORGANIZED BY

*Bridge & Wind Engineering Laboratory
Department of Civil Engineering
The University of Tokyo*

Welcoming Address

Welcome to our 3rd ZHITU Symposium, a collaborative initiative of five world-leading universities: Zhejiang University, the Hong Kong Polytechnic University, the University of Illinois in Urbana-Champaign, the University of Tokyo, and Ulsan National Institute of Science & Technology. The acronym ZHITU, originating from selected letters of the 5 universities, translates to ‘智途’ in Chinese, which means ‘A Smart Path for the Future’.



Established in 2018, ZHITU's mission has been to amplify educational, research, and exchange endeavors in civil engineering among these universities. The first event was held at Zhejiang University, and the second symposium hosted by UNIST in 2021 transitioned online, showcasing our adaptability. Now, as we convene for our third symposium with approximately 100 attendees, we are poised to explore the ever-evolving potential of civil engineering.

The pace of technological advancement is staggering. Just within the past year, we've witnessed significant technological evolutions, such as generative AI. Civil engineers are now expected to grasp both the fundamentals and potential of recent technological advances alongside core civil engineering principles and social needs. As global academic leaders in civil engineering, our role has become more essential than ever.

Our technical program consists of six keynote lectures and 79 parallel presentations, followed by a panel discussion session for the future cooperation among the ZHITU universities. Additionally, there's a technical and cultural tour to experience some of Tokyo's modern marvels, like the Tokyo SkyTree.

I extend my profound gratitude to our esteemed coordinators: Prof. Yuanfeng Duan, Prof. Si-Wei Liu, Prof. Bill Spencer, Prof. Di Su, and Prof. Myoungsu Shin. Their dedication has been crucial to the success of this symposium. Additionally, our organizing committee has worked tirelessly to make this event possible.

I encourage each participant to fully engage in the coming days. Let us delve into scholarly discussions, exchange insights, and foster meaningful dialogues. It is my aspiration that we depart with enriched perspectives and fortified collaborations.

August 20, 2023

Prof. Tomonori Nagayama, Symposium Chair

Professor of Civil Engineering

The University of Tokyo, Japan

Symposium Organization

● Symposium Themes

Structural Health Monitoring and Damage Detection
Concrete Materials and Structures
Advances in Structural Analysis
Earthquake and Wind Engineering
Machine Learning for Structural Engineering
Structural Reliability and Safety

● Symposium Chair

Prof. Tomonori Nagayama, The University of Tokyo

● ZHITU Coordinators

Prof. Yuanfeng Duan, Zhejiang University (ZJU)
Prof. Siwei Liu, The Hong Kong Polytechnic University (HK PolyU)
Prof. Bill F. Spencer Jr, University of Illinois Urbana-Champaign (UIUC)
Prof. Di Su, The University of Tokyo (UTokyo)
Prof. Myoungsu Shin, Ulsan National Institute of Science and Technology (UNIST)

● International Scientific Committee

Chair: Di Su

Yuanfeng Duan (ZJU)	Siwei Liu (HK PolyU)	Tsukasa Mizutani (UTokyo)
Chung Bang Yun (ZJU)	Yiqing Ni (HK PolyU)	Kohei Nagai (UTokyo)
Yaozhi Luo (ZJU)	Yong Xia (HK PolyU)	Kenji Watanabe (UTokyo)
Yasutaka Narazaki (ZJU-UIUC)	Youlin Xu (HK PolyU)	Myoungsu Shin (UNIST)
Weijian Zhao (ZJU)	Songye Zhu (HK PolyU)	Young Joo Lee (UNIST)
Jiangpeng Shu (ZJU)	B.F. Spencer, Jr. (UIUC)	Jae Eun Oh (UNIST)
Yanfeng Zheng (ZJU)	Tsuyoshi Ichimura (UTokyo)	Gi Hyoug Cho (UNIST)
Fuyuan Gong (ZJU)	Tetsuya Ishida (UTokyo)	Jeongseob Kim (UNIST)
Jianguo Dai (HK PolyU)	Takeshi Ishihara (UTokyo)	Byungmin Kim (UNIST)
You Dong (HK PolyU)	Yuka Kikuchi (UTokyo)	Sukhoon Pyo (UNIST)
Siu-Kai Lai (HK PolyU)	Masaru Kitahara (UTokyo)	Gun Kim (UNIST)

● Local Organizing Committee (UTokyo)

Chair: Tomonori Nagayama

Secretariat: Masaru Kitahara, Di Su, Kai Xue, Boyu Zhao, Yaohua Yang

Student members: Ao Wang, Geda Jose Maria Guyamin, Modak Krishna

● Host

Bridge and Wind Engineering Laboratory, The University of Tokyo.

● Support and Sponsorship

Department of Civil Engineering, The University of Tokyo (<http://www.civil.t.u-tokyo.ac.jp/en/>)
The Endowed Program in the Science of Infrastructure Longevity (<https://longlife-infra.t.u-tokyo.ac.jp>)
Smart City Research Institute Co. Ltd (<https://www.smc-tech.com/en/>).

Conference Schedule

Sunday, August 20th, 2023				
8:30-9:00	Registration @ HASEKO-KUMA HALL, Lounge, Building No. 11			
9:00-9:30	Opening Ceremony @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11			
9:30-10:00	Keynote Lecture 1 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11			
10:00-10:30	Coffee Break @ HASEKO-KUMA HALL, Lounge, Building No. 11			
10:30-12:00	Parallel Session 1 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11	Parallel Session 2 @ KAJIMA HALL: Lecture Room No. 15, Building No. 1	Parallel Session 3 @ Lecture Room No. 13, Building No. 1	Parallel Session 4 @ Lecture Room No. 14, Building No. 1
12:00-13:30	Lunch Break @ HASEKO-KUMA HALL, Lounge, Building No. 11			
13:30-15:00	Parallel Session 5 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11	Parallel Session 6 @ KAJIMA HALL: Lecture Room No. 15, Building No. 1	Parallel Session 7 @ Lecture Room No. 13, Building No. 1	Parallel Session 8 @ Lecture Room No. 14, Building No. 1
15:00-15:30	Coffee Break @ HASEKO-KUMA HALL, Lounge, Building No. 11			
15:30-16:00	Keynote Lecture 2 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11			
16:00-16:30	Keynote Lecture 3 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11			
16:30-17:00	Campus Tour			
17:45-	Networking Dinner			

Monday, August 21st, 2023				
8:30-8:45	Registration @ HASEKO-KUMA HALL, Lounge, Building No. 11			
8:45-9:00	2 nd Day Opening Ceremony @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11			
9:00-9:30	Keynote Lecture 4 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11			
9:30-10:00	Keynote Lecture 5 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11			
10:00-10:30	Coffee Break @ HASEKO-KUMA HALL, Lounge, Building No. 11			
10:30-12:00	Parallel Session 9 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11	Parallel Session 10 @ KAJIMA HALL: Lecture Room No. 15, Building No. 1	Parallel Session 11 @ Lecture Room No. 13, Building No. 1	Parallel Session 12 @ Lecture Room No. 14, Building No. 1
12:00-13:30	Lunch Break @ HASEKO-KUMA HALL, Lounge, Building No. 11			

Monday, August 21st, 2023

13:30-14:30	Parallel Session 13 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11	Parallel Session 14 @ KAJIMA HALL: Lecture Room No. 15, Building No. 1	Parallel Session 15 @ Lecture Room No. 13, Building No. 1	
14:30-15:00	Coffee Break @ HASEKO-KUMA HALL, Lounge, Building No. 11			
15:00-15:30	Keynote Lecture 6 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11			
15:30-16:30	Panel Discussion and Concluding Remarks @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11 Group Photo @Yasuda Auditorium			
18:30-	Cruise Dinner			

Tuesday, August 22nd, 2023

9:40-12:00	Technical Tour Nikken Sekkei Building (https://www.nikken.co.jp/en/about/pynt.html)
13:40-17:30	Technical Tour Tokyo Skytree Observatory Deck (https://www.tokyo-skytree.jp/en/)

Academic Program

Sunday, August 20th, 2023

Keynote Lectures

9:30-10:00

Keynote Lecture 1

@ HASEKO-KUMA HALL, Lecture Hall, Building No. 11
Chair: Tomonori Nagayama (UTokyo)



Key Technologies on Service Performance Assurance and Improvement of Steel Cables for Long Span Bridges
Prof. Yuanfeng Duan (ZJU)

15:30-16:00

Keynote Lecture 2

@ HASEKO-KUMA HALL, Lecture Hall, Building No. 11
Chair: Prof. Myoungsu Shin (UNIST)



Finite-Element Seismic Ground Motion Simulation Enhanced with High-Performance Computing
Prof. Kohei Fujita (UTokyo)

16:00-16:30

Keynote Lecture 3

@ HASEKO-KUMA HALL, Lecture Hall, Building No. 11
Chair: Prof. Chung Bang Yun (ZJU)



New Developed Cementless Binders Using Fly Ash or CGBFS Using New Activators
Prof. Jae Eun Oh (UNIST)

Parallel Sessions

Morning: 10:30-12:00

Time	Title	Speaker
Parallel Session 1: Structural Health Monitoring and Damage Detection 1 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11 Chairs: Prof. Hyungchul Yoon (CNU), Prof. Kai Xue (UTokyo)		
10:30-10:45	Guided Wave Methods for Local Damage Detection	Prof. Chung Bang Yun (ZJU)
10:45-11:00	Full-Field Motion Estimation in Complex Environments Using Illumination-Invariant Phase-based Optical Flow	Mr. Yuchao Wang (HK PolyU)
11:00-11:15	Estimation of the Fundamental Natural Frequency of a Bridge Pier Subjected to Scouring Using the Random Decrement	Mr. Phillip Markert (UTokyo)
11:15-11:30	Surface and Member Estimation of Bridge From Point Cloud Analysis	Mr. Shogo Inadomi (UTokyo)

11:30-11:45	Development of Strain Visualization Sensor through Mechanochemistry: A Novel Approach for Strain Measurement	Prof. Gun Kim (UNIST)
11:45-12:00	Vision-based Structural Health Monitoring for Pedestrian Suspension Bridges	Prof. Hyungchul Yoon (CNU)
Parallel Session 2: Concrete Materials and Structures 1 @ KAJIMA HALL: Lecture Room No.15, Building No. 1 Chairs: Prof. Myoungsu Shin (UNIST), Prof. Jae Eun Oh (UNIST)		
10:30-10:45	Predicting Bent Corner Strength of FRP Reinforcement based on Genetic Algorithm	Mr. Tianren Jiang (ZJU)
10:45-11:00	Feasibility of Minimal-Damage Assessment Method for Frost Resistance Evaluation of Concrete	Mr. Sothyarak Rath (UTokyo)
11:00-11:15	Investigation of the Influence of Asphalt Layer Bonding on the Strain and Stress Behavior of Continuously Reinforced Concrete Pavement	Mr. Tomoki Nagata (UTokyo)
11:15-11:30	Development of Self-Heating Cement Composites using Carbon Materials	Prof. Seongwoo Gwon (HNU)
11:30-11:45	Application of Wave Interferometry in Monitoring Aggregate Size Effects on Curing and Drying of Concrete	Mr. Geetanjali Chandam (UNIST)
Parallel Session 3: Advances in Structural Analysis 1 @ Lecture Room No. 13, Building No. 1 Chairs: Prof. Yanfeng Zheng (ZJU), Dr. Yaohua Yang (UTokyo)		
10:30-10:45	GPU-Accelerated SPH Method for Fluid-Structure Interaction Simulation	Mr. Jialong Ruan (ZJU)
10:45-11:00	The Application of Oblique Photography in 3D Modeling	Mr. Shijie Zhou (ZJU-UIUC)
11:00-11:15	Mechanical Behavior of Y-Shape Steel Sleepers on Ballasted Track under Vertical Loading	Dr. Peyman Aela (HK PolyU)
11:15-11:30	Photogrammetry-based Computational Fluid Dynamics for High-Fidelity Digital Twins	Mr. Xuguang Wang (UIUC)
11:30-11:45	Numerical Study of Debris Impact on Okitsuru Bridge during Flood Events	Ms. Miao Yu (UTokyo)
11:45-12:00	Influence of Soil-Structure Interaction on the Transverse Displacement Response of a Railway Viaduct	Ms. Zainab Farooq (UTokyo)
Parallel Session 4: Earthquake and Wind Engineering 1 @ Lecture Room No. 14, Building No. 1 Chairs: Prof. Di Su (UTokyo), Dr. Qinlin Cai (HK PolyU)		
10:30-10:45	Spectral Analysis of a Cable with a VIMD for Random Wind in the State-Space Formulation	Mr. Nan Deng (ZJU)
10:45-11:00	Negative Stiffness Energy-harvesting Electromagnetic Damper: Stay Cable Application	Dr. Qinlin Cai (HK PolyU)
11:00-11:15	LES Study of Thermal Stratification Effects on Turbulent Flow Fields over a Three-Dimensional Steep Hill	Mr. Tong Zhou (UTokyo)
11:15-11:30	Generative Adversarial Network to Produce Response Spectra-Compatible Artificial Accelerograms	Mr. Jisong Kim (UNIST)
11:30-11:45	Application of Emergency Response Difficulty Coefficient Developed by Tokyo Metropolitan Government to Korea	Mr. Dongwoo Kim (UNIST)

Afternoon: 13:30-15:00		
Time	Title	Speaker
Parallel Session 5: Structural Health Monitoring and Damage Detection 2 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11 Chairs: Prof. Yasutaka Narazaki (ZJU-UIUC), Prof. Boyu Zhao (UTokyo)		
13:30-13:45	Development of Random Bridge Generator for Computer Vision-based Structural Inspection	Ms. Mingyu Shi (ZJU-UIUC)
13:45-14:00	Evaluation of RGB-Thermal Image Fusion Techniques for Deep-Learning Based Damaged Detection in Large Civil Infrastructure	Mr. Quincy G. Alexander (UIUC)
14:00-14:15	Development of Damage Diagnosis VQA Using Images and Comments in Bridge Inspection Reports	Mr. Sota Fukaya (UTokyo)
14:15-14:30	Detection and Condition Assessment of Roadway Assets using Video Images for Improved Maintenance Management and Traffic Safety	Ms. Chinee Lou Pirus (UTokyo)
14:30-14:45	Estimation of Spatio-Temporal Frequency Variation for Vehicle Bridge Interaction using MST-GAN	Prof. Robin Eunju Kim (HYU)
Parallel Session 6: Earthquake and Wind Engineering 2 @ KAJIMA HALL: Lecture Room No. 15, Building No. 1 Chairs: Prof. Fei Wang (HK PolyU), Dr. Hoang D. Nguyen (UNIST)		
13:30-13:45	Seismic Performance Investigation of Precast RC Shear Wall Structure Vertically Connected by a Novel Indirect-Lapping Joint	Mr. Qingmin Wang (ZJU)
13:45-14:00	Multi-Scale Simulation of Turbulent Wind Field under Strong Typhoon	Prof. Fei Wang (HK PolyU)
14:00-14:15	Prediction of Turbulent Flow over a Steep Hill by TANS Model	Ms. Xiangyan Chen (UTokyo)
14:15-14:30	The Effect of Pohang Earthquake on Property Value: The Role of Seismic Design	Prof. Jeongseob Kim (UNIST)
14:30-14:45	Seismic Damage-State Prediction of Reinforced Concrete Wall Structures Using Machine Learning	Dr. Hoang D. Nguyen (UNIST)
14:45-15:00	Prospects of Neural Radiance Field (NeRF) for Post Earthquake Damage Assessment of Building Structures	Mr. Khurram Shabbir (SKKU)
Parallel Session 7: Machine Learning for Structural Engineering 1 @ Lecture Room No. 13, Building No. 1 Chairs: Dr. Takahiro Yamaguchi (UTokyo), Dr. Yongjia Xu (ZJU-UIUC)		
13:30-13:45	Deep Learning-based Construction Activity Recognition with Vibration Monitoring Data	Dr. Qiuhan Meng (HK PolyU)
13:45-14:00	Implementation of Emerging Machine-Learning Techniques for Second-Order Analysis of Beam-Columns through Physics-Informed Neural Networks	Mr. Weihang Ouyang (HK PolyU)
14:00-14:15	Detection of Mud Pumping using Time-Series Images of Rail Track	Mr. Shashanka Katta (UTokyo)
14:15-14:30	Underground Object Segmentation by Unsupervised Learning in 3D-GPR Image	Mr. Jingzi Chen (UTokyo)
14:30-14:45	Machine Learning-based Rapid Prediction of Landslide Dam Stability Considering Material Types	Dr. Xianfeng Li (UTokyo)
Parallel Session 8 Concrete Materials and Structures 2 @ Lecture Room No. 14, Building No. 1 Chairs: Prof. Seongwoo Gwon (HNU), Dr. Chanyoung Kim (UNIST)		
13:30-13:45	Numerical Simulation of Concrete Fracture at Extreme Temperatures due to Hydrothermal Mechanical Processes	Mr. Elia Nicolin (UTokyo)

13:45-14:00	Meso-Scale Simulation of Moisture Transfer in Concrete Using 3D RBSM Conduit Model	Mr. Dawei Ren (UTokyo)
14:00-14:15	Numerical Study on Anchorage Performance of Precast Concrete Structures with Old-to-New Concrete Interface by Mesoscale Simulation	Mr. Jiaxu Yao (UTokyo)
14:15-14:30	Electrical Curing of Alkali-Activated Fly Ash Concrete	Mr. Jun Kim (UNIST)
14:30-14:45	Development of Thermal Neutron Shielding Artificial Aggregate for Spent Nuclear Fuel Concrete Cask	Mr. Dohoon Kim (UNIST)
14:45-15:00	Experiment Study of Modified Tesla Valve Design on Surface Perforated Mortar (SPM) for Sound Absorption	Ms. Nazhiefah Dalila (UNIST)

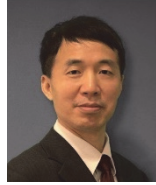
Monday, August 21st, 2023

Keynote Lectures

9:00-9:30

Keynote Lecture 4

@ HASEKO-KUMA HALL, Lecture Hall, Building No. 11
Chair: Prof. Yuanfeng Duan (ZJU)



Typhoon-Induced and Temperature-Induced Responses of a Cable-Stayed Bridge
Prof. Yong Xia (HK PolyU)

9:30-10:00

Keynote Lecture 5

@ HASEKO-KUMA HALL, Lecture Hall, Building No. 11
Chair: Prof. Bill F. Spencer Jr. (UIUC)



Stochastic Model Updating Under Hybrid Uncertainties:
Distribution-Free Approach
Prof. Masaru Kitahara (UTokyo)

15:00-15:30

Keynote Lecture 6

@ HASEKO-KUMA HALL, Lecture Hall, Building No. 11
Chair: Prof. Yozo Fujino (JU/UTokyo)



Rapid Post-Earthquake Structural Inspection and Evaluation of Civil Infrastructure
Prof. Bill F. Spencer Jr. (UIUC)

Parallel Sessions

Morning: 10:30-12:00

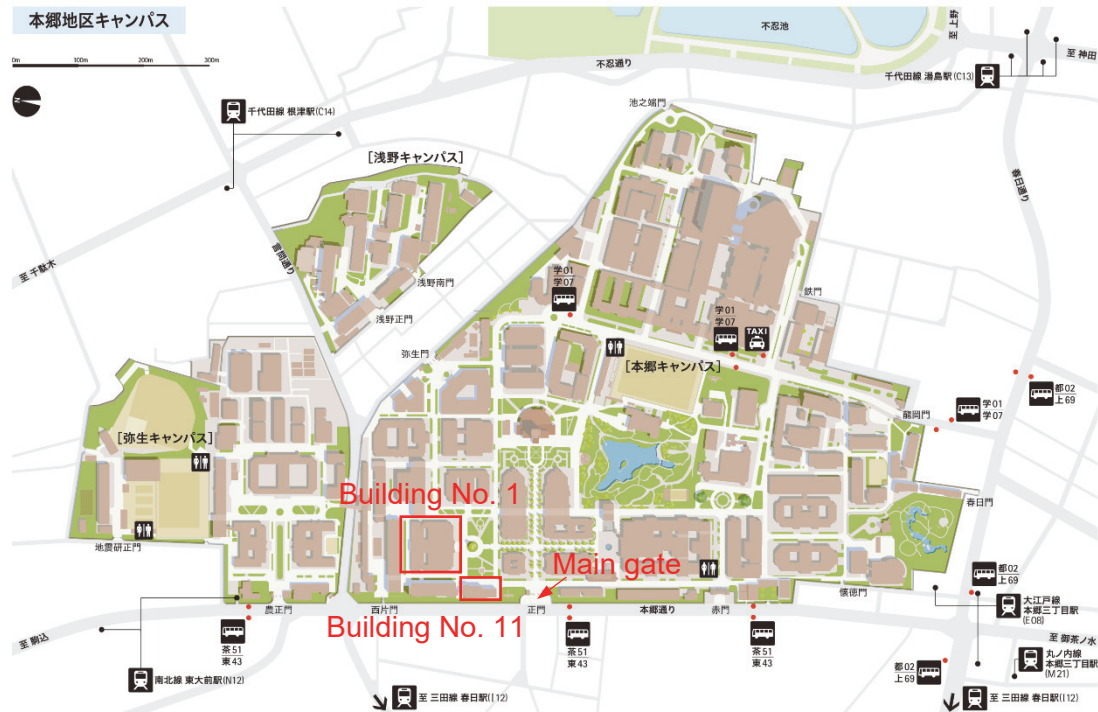
Time	Title	Speaker
Parallel Session 9: Structural Reliability and Safety @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11 Chairs: Prof. Masaru Kitahara (UTokyo), Dr. Chanyoung Kim (UNIST)		
10:30-10:45	Life-Cycle Seismic Capacity Assessment of Coastal Bridges under Marine Environment	Dr. Hongyuan Guo (HK PolyU)
10:45-11:00	A Formulation for Nonstationary Stochastic Dynamic Topology Optimization Applied in Buildings	Mr. Sebastian Pozo (UIUC)
11:00-11:15	Integrating Kalman Filter with Simulated Commercial FEM Software for Single Degree of Freedom Systems	Mr. Jose Maria Guyamin GEDA (UTokyo)
11:15-11:30	Enhancing Pedestrian Safety Behavior within a Multi-User Virtual Reality Environment with Micro-Mobility	Prof. Gi-Hyong Cho (UNIST)
11:30-11:45	Pressure Fragility Analysis of Reactor Concrete Containments Considering Material Uncertainties	Dr. Chanyoung Kim (UNIST)

Parallel Session 10: Machine Learning for Structural Engineering 2 @ KAJIMA HALL: Lecture Room No. 15, Building No. 1 Chairs: Prof. Siu-Kai Lai (HK PolyU), Prof. Robin Eunju Kim (HYU)		
10:30-10:45	Study on the Application of AI to Joint Performance Analysis	Mr. Qiliang Zhao (ZJU)
10:45-11:00	Iterative Self-Transfer Learning: A General Methodology for Response Time-History Prediction based on Small Dataset	Dr. Yongjia Xu (ZJU-UIUC)
11:00-11:15	Vibration Analysis based on a Novel Physics-Informed Neural Network Technique	Prof. Siu-Kai Lai (HK PolyU)
11:15-11:30	Knowledge Distillation-based Domain Generalization for Structural Damage Detection via Bayesian Inference	Prof. Xiaoyou Wang (HK PolyU)
11:30-11:45	A Deep Learning Approach for Road Crack Evaluation Using Smartphones	Prof. Takahiro Yamaguchi (UTokyo)
11:45-12:00	Estimation of Internal Corrosion Degree with Surface Cracking of Concrete Using Discrete Analysis Model and Machine Learning	Mr. Tianyu Shao (UTokyo)
Parallel Session 11: Structural Health Monitoring and Damage Detection 3 @ Lecture Room No. 13, Building No. 1 Chairs: Prof. Gun Kim (UNIST), Dr. Qiuhan Meng (HK PolyU)		
10:30-10:45	Performance of Visual SLAM Algorithms in Bridge Inspection Environment	Mr. Linlong Meng (ZJU-UIUC)
10:45-11:00	Self-Powered Sensors for Coastal Bridges: Advancements in Civil Engineering by Triboelectric Nanogenerators	Mr. Ali Matin Nazar (ZJU-UIUC)
11:00-11:15	Simplified Temperature Load Model for Long-Span Cable-Stayed Bridges	Ms. Yushi Shan (HK PolyU)
11:15-11:30	Simple Case of Crack Propagation Monitoring using Strain Gages for Inaccessible Steel Structures	Mr. Ray Ausan (UIUC)
11:30-11:45	Indirect Deflection Estimation for Highway Bridge based on Tire-Road Contact Point Profile Measured by Moving Vehicle	Mr. Ao Wang (UTokyo)
11:45-12:00	Track Profile Estimation Using a Half Car Model and Unsupported Sleeper Detection Considering Train Vehicle Weight Difference	Mr. Daichi Masuda (UTokyo)
Parallel Session 12 Concrete Materials and Structures 3 @ Lecture Room No. 14, Building No. 1 Chairs: Prof. Sukhoon Pyo (UNIST), Prof. Eunjong Ahn (JNU)		
10:30-10:45	Experimental Validation of Computational Design of Cement-based Mechanical Metamaterials	Mr. Koichi Imagawa (UTokyo)
10:45-11:00	Accurate and Fast Damage Thickness Estimation in Concrete Using Smartphone-Equipped Handheld GPR and Spectrum Pattern Matching	Mr. Shunsuke Iwai (UTokyo)
11:00-11:15	Prediction of Residual Capacity of Corrosion Damaged RC Beams with MPC-RBSM	Mr. Yi Gao (UTokyo)
11:15-11:30	Rheological Properties of Cement Composites with Cellulose Microfibers and Accelerator for Use in 3D Printing	Mr. Eun San Cho (UNIST)
11:30-11:45	The Influence of Crystallinity of Al ₂ O ₃ for Ye'elimite Synthesis	Mr. Juan Yu (UNIST)
11:45-12:00	Monitoring and Evaluation of Self-Healing in Concrete Using Air-Coupled Surface-Wave Technique	Prof. Eunjong Ahn (JNU)

Afternoon: 13:30-14:30		
Time	Title	Speaker
Parallel Session 13: Advances in Structural Analysis 2 @ HASEKO-KUMA HALL, Lecture Hall, Building No. 11 Chairs: Prof. Si-Wei Liu (HK PolyU), Dr. Yaohua Yang (UTokyo)		
13:30-13:45	Analysis of Structural Performances of Jiangmen Underground Neutrino Observatory (JUNO) Detector	Prof. Yanfeng Zheng (ZJU)
13:45-14:00	Fiber-based Approach for Structural Collapse Analysis Using Finite Particle Method	Mr. Yuxiang Cai (ZJU)
14:00-14:15	Recent Research Development in Direct Analysis Method for Stability Design of Modern Steel Structures with Irregular Cross-sections	Prof. Si-Wei Liu (HK PolyU)
14:15-14:30	A Novel IsoGeometric Analysis based Shell Element in a Curvilinear Coordinate System	Mr. M. A. K. M. Dharamasiri (UTokyo)
Parallel Session 14: Structural Health Monitoring and Damage Detection 4 @ KAJIMA HALL: Lecture Room No. 15, Building No. 1 Chairs: Prof. Xiaoyou Wang (HK PolyU), Prof. Boyu Zhao (UTokyo)		
13:30-13:45	Automatic Generation of Finite Element Models based on Image Survey	Mr. Zeyi Liu (ZJU-UIUC)
13:45-14:00	Road Profile Evaluation Using Smartphone Data on a Bicycle and Kalman Filter	Mr. Krishna Modak (UTokyo)
14:00-14:15	Vision-based Measurement of Stay-Cable and Tension Estimation by Motion Magnification	Prof. Dionysius M. Siringoringo (YNU)
14:15-14:30	Exterior Damage Map Reconstruction Using Out-of-Plane Motion Measurement by Optimal Deployment of Laser Beams on UAV	Ms. Hajin Ye (SKKU)
Parallel Session 15: Concrete Materials and Structures 4 @ Lecture Room No. 13, Building No. 1 Chairs: Prof. Sukhoon Pyo (UNIST), Dr. Hoang D. Nguyen (UNIST)		
13:30-13:45	Mesoscopic Simulation of Shrinkage Strain Variation During Drying in Concrete with Internal Restrain	Mr. Haoyu Wang (UTokyo)
13:45-14:00	Anchorage Performance of RC Beams Strengthened with FRP/SMA Composites	Mr. Yan-Jie Xue (UTokyo)
14:00-14:15	Achievement of High Porosity Sustainable Cementitious Composites without Compressive Strength Degradation	Mr. Siyu Wu (UNIST)
14:15-14:30	Nonlinear Ultrasound Technique for Precise Material Characterization: Elucidating Anisotropic Nature in Granite	Mr. Seungo Baek (UNIST)

Campus Map

The map of Hongo Campus, The University of Tokyo



令和5(2023)年4月版

The front gates of Building No. 1 and Building No. 11



The front gate of Building No. 1



The front gate of Building No. 11

Social Events and Tours

Casual Networking Dinner (August 20th)

A casual networking dinner has been scheduled for Sunday, August 20th. All participants are invited to attend. Here are the event specifics:

Gathering Time and Location:

17:45 at ALEGRIA AKASAKA

Akasaka Intercity AIR 1F, 1-8-1 Akasaka, Minato-ku, Tokyo

For directions to the venue, you can scan the QR code provided below:



Symposium Buffet (August 21st)

A cruise tour featuring an onboard symposium buffet has been scheduled for Monday, August 21st. All participants are invited to attend. Here are the event specifics:

Gathering Time and Location:

18:00 at Anniversary Cruise Pier

1 Chome-16-3 Kaigan, Minato City, Tokyo

Cruise Tour Schedule:

- 18:15: Boarding time
- 18:30: Departure from Anniversary Cruise Pier
- 20:30: Arrival at Anniversary Cruise Pier

For directions to the venue, you can scan the QR code provided below:



Technical and Cultural Tours (August 22nd)

Technical tour in the morning

A technical tour has been scheduled at Nikken Sekkei Ltd. for Tuesday, August 22nd, in the morning. Here are the event specifics:

Gathering Time and Location:

9:40 at the main gate of Nikken Sekkei Ltd

2 Chome-18-3, lidabashi, Chiyoda City, Tokyo

(The company is about 10-minute walk from Kudanshita Station. ZHITU Symposium volunteers, identifiable by their ZHITU attire, will be stationed near Exit 5 of Kudanshita Station to greet you. If you're uncertain about the route, don't hesitate to approach these volunteers for assistance.)

Schedule:

- 10:00-11:00: Lecture on Structural Design (including Tokyo Skytree)
- 11:00-12:00: Exploration of the Concept of Office Design at Nikken Sekkei Ltd.

For directions to the venue, you can scan the QR code provided below:



Cultural tour in the afternoon

A cultural bus tour has been scheduled for Tuesday, August 22nd, in the afternoon. Here are the event specifics:

Riding Time and Location

13:40 at Exit 5 of Kudanshita Station, located near Starbucks Coffee.

(ZHITU Symposium volunteers, identifiable by their ZHITU attire, will be awaiting your arrival near Exit 5 of Kudanshita Station to greet you.)

Schedule:

- 13:50 (Departure): Riding time
- 14:30~16:10: Tokyo Skytree Tembo Galleria
- 16:50~17:20: The Imperial Palace
- 17:30 (Arrival): Tokyo Station