INTERNATIONAL SEMINAR

The 10th FORUM for Advanced Fire Education/Research in Asia
&
The 1st International Multi-hazard Urban Disaster Prevention Research

March 5-7, 2026

Center for Fire Science and Technology,
Research Institute for Science and Technology
TOKYO UNIVERSITY OF SCIENCE

Research Center for Multi-hazard Urban Disaster Prevention
TOKYO UNIVERSITY OF SCIENCE

Purpose: Since its establishment in 2012, the FORUM for Advanced Fire Education/Research in Asia has served as a platform for sharing knowledge on fire science education, research, and major fire incidents across Asia. The 10th FORUM, hosted by Tokyo University of Science, will introduce initiatives in fire science education and research, discuss national efforts for fire risk reduction, and address the growing complexity of urban hazards. In collaboration with the Multi-hazard Urban Disaster Prevention Research Center, this event aims to foster international cooperation and promote advancements in fire science and urban disaster prevention.

SEMINAR PROGRAM

Chair: **Ken Matsuyama**
Center for Fire Science and Technology,
Tokyo University of Science, Japan

1st day — Fire Research -Education & Research- (March 5, 2026)

Opening Ceremony

Time	Title	Speaker
10:00-10:05	Opening Remarks	**Ken Matsuyama** — Chair of the 10th FORUM (Tokyo University of Science)
10:05-10:10	Wecome Address	**Hiroshi Nishihara** — Director, Research Institute for Science and Technology, Tokyo University of Science

Session 1: Studies on Recent Fire Events and Lessons Learned
Chair: **Shinya Yanagita** — Tokyo University of Science

Time	Title	Speaker
10:10-10:40	Analysis of occupant tenability in high-rise building fires: effects of fire suppression systems and fire exit doors	**Guan-Yuan Wu** — Central Police University
10:40-11:10	Analysis of major fire incidents involving fatalities	**Md. Zahirul Islam** — Bangladesh Fire Service and Civil Defence
11:10-11:40	Design-by-Disaster: The Fires That Rewrote Malaysia's Building Code	**Farid Wajdi Akashah** — Universiti Malaya
11:40-12:10	Effectiveness evaluation of firefighting activities for the 2025 Ofunato forest fire	**Masafumi Hosokawa** — Tokyo University of Science

—— Lunch / Poster Session ——

Session 2: Emerging Trends in Fire Science Education and Research
Chair: **Ritsu Dobashi** — Tokyo University of Science

Time	Title	Speaker
14:00-14:30	Aviation Safety Engineering Collaboration and Aspects of a Big Fire	**Wan-ki Chow** — Civil Aviation and Flying University of China
14:30-15:00	Education and research need in structural fire engineering	**Chao Zhang** — Wuhan University
15:00-15:30	Fire and explosion risks resulting from functional changes in residential buildings in Hanoi, Vietnam	**Doan Thanh Binh** — UAI, Hanoi University of Civil Engineering
15:30-16:00	Next-Stage Strategic Perspectives for the Fire FORUM	**Ken Matsuyama** — Tokyo University of Science

—— Coffee Break ——

Time		
16:30-17:30	**Panel Discussion** — Fire Science Education and Research: Present Challenges and Future Directions	Moderator: **Kazunori Kuwana** — Tokyo University of Science
17:30-19:30	**Welcome Reception**	Building 7, 6th Floor Conference Room 1

2nd day — Muti-hazard Disaster Research (March 6, 2026)

Session 1: 2025 Ofunato Wildland-Urban Interface (WUI) Fire Investigation
Chair: Kazunori Kuwana
Tokyo University of Science

Time	Title	Speaker
10:10-10:40	Fire spread in the 2025 Ofunato wildfire	**Kazunori Kuwana** — Tokyo University of Science
10:40-11:10	Building Damage in the 2025 Ofunato Wildfire: Characteristics and Contributing Factors	**Yuta Suzuki** — Building Research Institute
11:10-11:40	Effects of Fire-Induced Water-Repellent Layers and Vegetation Recovery on Runoff Responses after the Ofunato Forest Fire	**Yasunori Igarashi** — University of Tsukuba
11:40-12:10	Hydrological perspectives on the 2025 Ofunato wildfire in Japan	**Yoshiya Touge** — Chiba University
12:10-12:40	Recovery from Wildland Urban Interface Fires: Lessons from the Ofunato City Fire (tentative)	**Kazuya Sugiyasu** — Iwate Prefectural University

——— Lunch ———

Session 2: Advanced Research on Multi-hazard Urban Disaster Prevention
Chair: Hideki Yaginuma
Tokyo University of Science

Time	Title	Speaker
13:40-14:00	Introduction of multi-hazard research in TUS	**Yasuo Nihei** — Professor, Tokyo University of Science
14:00-14:20	Earthquake Source Modeling and Evacuation Simulation as Components within Multi-Hazard Research	**Naofumi Aso** — Associate Professor, Tokyo University of Science
14:20-14:40	Behavior of base−column connections in wooden houses under sequential seismic and tsunami loads	**Yuji Miyazu** — Associate Professor, Tokyo University of Science
14:40-15:10	Advances in multi-hazard and multi-risk science and practice: learnings from the MYRIAD-EU project	**Philip Ward** — Professor, Vrije Universiteit Amsterdam

——— Coffee Break ———

Chair: Yuji Miyazu
Tokyo University of Science

Time	Title	Speaker
15:30-15:50	Effective Countermeasures for Buildings against Multi-Hazards (Strong Ground Motion, Surface Fault Rupture, Fire, Flood, Debris Flow, etc.)	**Yoshiaki Hisada** — Professor, Kogakuin University
15:50-16:20	Global Exposure Inequalities and Regional Mapping for Multi-Hazard Early Warning	**Timothy Tiggeloven** — Postdoctoral researcher, Vrije Universiteit Amsterdam
16:20-16:40	Vulnerability Analysis of Transportation Networks in Multi-Hazard Disasters	**Hideki Yaginuma** — Associate Professor, Tokyo University of Science
16:40-17:10	Data-driven approaches to Multi-Hazard Risk and Climate Resilience: from extreme events to systemic perspectives	**Davide Mauro Ferrario** — Postdoctoral researcher, CMCC Foundation
17:10-17:20	*Closing Address*	**Yoshifumi Ohmiya** — Tokyo University of Science

3nd day — Technical Tour (March 7, 2026)

Creep deformation and rupture behavior of high-strengthstructural steel over 500 MPa at elevated temperatures	**Jun Yan, Chao Zhang** Wuhan University
Development of an in-situ compartment fire testing method with real-time fire parameter prediction and regulation using deep learning	**Shijie Li, Chao Zhang** Wuhan University
Pre-Evacuation Behaviour of Kindergarten Children during Fire Drills: A Malaysian Case Study	**Hongwei Liu** Universiti Malaya
The Impact of Alley Spatial Structures on Fire Prevention and Fightinng Efforts in Hanoi, Vietnam	Doan Minh Thu, Vu Trieu Linh, Mai Huyen Sam (co-presenters), Doan Thanh Binh Hanoi University of Civil Engineering
Study on the Characteristics of Hot Gas Jets Considering Unburned Excess Gas: Influence of Heat Release from Wooden Interior Materials	Tomoya Watanabe, Yoshifumi Ohmiya Tokyo University of Science
Chemistry of Fire Causes of Lithium-Ion Battery and Electrolyte	Satsuki Hotta, Takashiro Akitsu Tokyo University of Science
Layout−Wind Interaction and Fire Spread in Dense Low-Rise Neighborhoods An FDS-Based CFD Study Incorporating Building Arrangement and Spacing	Ahmad Faiz Fauzi Bin Zulkifli, Kazunori Kuwana Tokyo University of Science
Numerical Investigation of Fire Propagation on Canyon Terrain with Varying Slopes Using Fire Dynamics Simulator (FDS)	Punchita Pitiphimolwat, Kazunori Kuwana Tokyo University of Science
Analysis of the Influence of Wind-catcher Configurations on the Development of Compartment Fires Using Fire Dynamics Simulator	Pham Hoang Ban, Kazunori Kuwana Tokyo University of Science
The effectiveness of physical fitness management in supporting safe job performance among firefighters	Taiki Ueno, Takeru Washizawa, Shinya Yanagita Tokyo University of Science
Effects of wearing the fireproof equipment on physical activity	Takeru Washizawa, Taiki Ueno, Shinya Yanagita Tokyo University of Science
Efficacy of Charged Water Spraying for visibility improvement in a smoke-filled enclosure	MALI BHASKARJYOTI, Ken Matsuyama Tokyo University of Science
Developing Indicators for Improving Safety in Evacuation Shelters -An Experimental Study on Flame-retardancy and Aging of Cardboard-	Zonta Miyamoto, Ken Matsuyama Tokyo University of Science
Estimating the Value of a Statistical Life in Residential Fire Safety in Japan Using a Discrete Choice Experiment	Hayato Tokiwa, Ryuta Takashima, Kazuya Ito, Masayuki Mizuno Tokyo University of Science
Egocentric distance perception of evacuation signs in virtual reality: A perceptual distance matching approach	Duc Dat Vuong, Seongkyung Park, Masayuki Mizuno Tokyo University of Science
Study on How Risk Preference Affects Evacuation Choice Using VR Experiment	**Jin Bitao, Masayuki Mizuno** Tokyo University of Science
Study on the Effectiveness of Congestion-Display-Type Evacuation Guidance Lights Using Virtual Reality	**Wang Haoning, Masayuki Mizuno** Tokyo University of Science
Analysis of Congestion Propagation Induced by Counterflow During Staircase Descent in Full-Building Evacuation Drills in High-Rise Office Building	Taehyeong Kim, Seongkyung Park, Masayuki Mizuno Tokyo University of Science
Analysis of The Impact of Merging Order Between Stair Descent and Entry on Evacuation Flow in Staircase	Doan Huu Manh, Seongkyung Park, Vuong Duc Dat, Masayuki Mizuno Tokyo University of Science

Venue:

Tokyo University of Science, Noda Campus, Building 7, 6th Floor Auditorium