

Volcanic eruptions have caused large damages around the world, such as the Hunga Tonga–Hunga Ha'apai eruption and tsunami (HT-HH) in January 2022. Japan is one of the most volcanic countries in the world where volcanoes erupt frequently, and there are concerns about the impact of the eruption of Mt. Fuji on the Tokyo metropolitan area. In this symposium, we will exchange information on domestic and international efforts and technological trends, and consider issues that need to be addressed in the future.

Date and time: Monday, January 16, 2023 1:30pm – 5:00pm

Venue: Online (ZOOM webinar)

Language: Japanese/English (simultaneous translation)

Hosted by: National Graduate Institute for Policy Studies, Building Research Institute

Supported by: National Institute for Land and Infrastructure Management of the Ministry of Land, Infrastructure, (to be confirmed) Transport and Tourism, Urban Renaissance Agency, Japan Housing Finance Agency, Japan Federation of Architects & Building Engineers Association, The Japan Institute of Architects, Japan Association of Architectural Firms, Japan Structural Consultants Association, Japan Federation of Construction Contractors, Condominium Management Companies Association, Japan Federation of Housing Organizations, Architectural Institute of Japan, The Japan Building Disaster Prevention Association, Center for Better Living, Consortium for Building Research & Development, Japan Academic Network of Disaster Reduction

Program:

Facilitator: **Masaru SUGAHARA (Professor, GRIPS)**

13:30-13:40 **Introductory Remarks**

Tatsuya AZUHATA (Director, Dept. of Structural Engineering, BRI)

13:40-15:20 **Part 1 Tonga HT-HH Volcanic Eruption Disaster and Preparedness**

Moderator: **Bunichiro SHIBAZAKI (Director, International Institute of Seismology and Earthquake (IISEE))**

(1) Presentation

Yushiro FUJII (Chief Research Scientist, IISEE, BRI)

“Simulations of the 2022 Tonga Eruption Tsunami Recorded on Ocean Bottom Pressure and Tide Gauges Around the Pacific”

Manu Mele Siale (Assistant Geologist, Ministry of Lands and Natural Resources, Kingdom of Tonga)

“Fragility Evaluation of building structures based on damage survey results of tsunami disaster from Hunga Tonga – Hunga Ha’apai eruption on 15 January 2022.”

Leger Victorina Stephanie Nodis (Chief Housing Sector Resilience Officer, Ministry of Infrastructure, Kingdom of Tonga)

“Structural performance evaluation of Cyclone Resilient Houses damaged due to tsunami after the January 2022 Hunga-Tonga-Hunga-Ha’apai volcanic eruption”

Toshiaki YOKOI (Senior Advisor, Global Environment Department, JICA)

“On Build Back Better Vision in the JICA’s support program”

(2) Discussion

15:20-15:30 **Break**

15:30-17:00 **Part 2 Disaster prediction of Mt. Fuji Eruption and preparedness**

Moderator: **Tatsuya AZUHATA (Director, Dept. of Structural Engineering, BRI)**

(1) Presentation

Eisuke FUJITA (Manager, National Research Institute for Earth Science and Disaster Resilience)

“Ashfall hazard around the metropolitan area, Japan”

Toru TAKAHASHI (Professor, Chiba University)

“Volcanic Ash Fall Considered by Analogy with Snow Fall”

Go IWASHITA (Professor, Tokyo City University)

“Countermeasure examples of volcanic ash for Buildings”

(2) Discussion

17:00 **Closing**

This symposium can be viewed on PC, smartphone, etc (please install the ZOOM app in advance). Please register by January 15, 2023 via URL below or the QR code.

Application to: https://grips-ac-jp.zoom.us/webinar/register/WN_YmD1A2FiTYyd_cv2H-_n5Q

Free of charge

Please note that applications will be closed when capacity is reached.

Contact: National Graduate Institute for Policy Studies (e-mail: grips.dms@gmail.com)

Subject to JSCA building structural engineer renewal evaluation points



Profile of Presenters

Yushiro FUJII

Chief Research Scientist, IISEE, BRI



In 2003, he received a doctorate in science from the Kyushu University. After working at the Research Institute for Information Technology of Kyushu University and the Active Fault Research Center of AIST, since 2005 he has been in charge of the Tsunami Disaster Mitigation Course of the International Training at the International Institute of Seismology and Earthquake Engineering (IISEE) of Building Research Institute (BRI). He has been researching source processes of earthquakes based on tsunami data and tsunami simulations.

Manu Mele Siale

Assistant Geologist, Ministry of Lands and Natural Resources, Kingdom of Tonga



Mele has been working with the Geohazard Section of the Ministry of Lands and Natural Resources since 2015. Throughout these years she co-lead the section since 2020. The section started monitoring volcanic activities using satellite imageries and we are planning on improving our services. Prior to Geohazard Section, Mele served as a secondary school teacher, teaching science and mathematics with the hope that more Tongan students will take up that pathway.

Leger Victorina Stephanie Nodis

Chief Housing Sector Resilience Officer, Ministry of Infrastructure, Kingdom of Tonga



I have been heavily involved with Post-Disaster Housing Reconstruction Programs for Tonga in the past and a core function of my role now is aimed at focusing on Housing Resilience and improving disaster mitigation planning for housing in Tonga. However, the Hunga Tonga-Hunga Ha'apai Volcanic eruption was an eye-opening experience for Tonga which calls for the need to re-evaluate its impacts on buildings and better prepare for future disasters.

Toshiaki YOKOI

Senior Advisor, Global Environment Department, JICA



Research Field: Applied Seismology, Engineering Seismology
Current Position from 2022.1, Visiting Research Fellow, IISEE, BRI
2020.4-2021.12 Senior Fellow, IISEE, BRI
2013-2020.3 Director, IISEE, BRI
2005-2021.12 Adjunct Professor, GRIPS

Eisuke FUJITA

Manager, Volcano Disaster Resilience Research Division, National Research Institute for Earth Science and Disaster Resilience



EF has been operating the observation network and has been mainly studying the seismic, geodetic data in NIED. In addition, EF has applied numerical simulation to many volcanic phenomena, as lava flow, dike intrusion, volcanic tremor by two-phase flow, interaction between earthquake and volcanic eruption, etc. Recently, EF focuses on the application of scientific knowledge into more practical scheme for volcanic disaster mitigation. President of the Volcanic Society of Japan, Executive committee member of IAVCEI.

Toru TAKAHASHI

Professor, Chiba University



He graduated from Tohoku University in 1985 and got Doctor of Engineering in 1990. He has been a professor at Chiba University from 2006. His specialties are loads and actions on buildings and structural reliability. He has served as head of the Kanto Branch of the AIJ (2020-2022), and president of the Japan Society of Snow Engineering (2018-2022). His major publications include AIJ Recommendations for Loads on Buildings (2015), Encyclopedia of Natural Disaster Science and Disaster Prevention (2022), all of which are as co-authors.

Go IWASHITA

Professor, Tokyo City University



1964 Born in Tokyo
1987 B.A. in Architecture, Waseda University
1992 Ph.D. in Architectural Engineering, Waseda University
1993-2005 Associate Professor, Dept. of Architecture, Kagoshima University
2005-2008 Associate Professor, Dept. of Architecture, Musashi Institute of technology
2008- Professor, Dept. of Architecture, Tokyo City University