

VOLCANOLOGY IN PRACTICE

International symposium
8–10 October 2025
Niigata University, Japan

SCHEDULE AND BOOK OF ABSTRACTS

Schedule

Day 1: 8th October 2025

Opening address

09:20–09:25 *Opening address*

Ushiki Tatsuo (President of Niigata University)

Plenary

09:30–10:20 *Practicing Volcanology in the Northern Andes*

Patricia Mothes (Insituto Geofisico, Escuela Politécnica Nacional, Quito Ecuador)

Break

10:20–10:40

Oral presentations

Session A: *Exposure, Preparedness, and Risk Reduction*

Chair: Jamie Farquharson

Keynote K01

10:40–11:20 *Are we prepared for the next big eruption?*

Lara Mani (Centre for the Study of Existential Risk, University of Cambridge, Cambridge, UK; Global Volcano Risk Alliance, Cambridge, UK), Jenty Kirsch-Wood, Mike Cassidy, Peter Alexander

O01

11:20–11:40 *Exploring volcanic risk management challenges for authorities and stakeholders operating in a multi-scalar governance system*

Heather M. Craig, Thomas M. Wilson, Teresa Gordon, Sarah Beaven, Kaz Lawson, Craig Campbell-Smart

O02

11:40–12:00 *Environmental Hazards in Asia: Building a Community of Disaster Researchers Across Asia*

James O. S. Hammond, D. Sodnomsambuu, O. Chimed, M. Bayaraa, N. Erdenetsogt, B. Amagalan, R. Walker, M. Kimberley

Lightning talks

12:00–12:15 P01–P03; P13–P18

Lunchtime and poster session

12:15–13:30

Poster presentations

Session A: *Exposure, Preparedness, and Risk Reduction*

P01

Identifying Potential Sources and Severity for Volcanic Ash Induced Disruption to Electricity Infrastructure in Japan

Natalie R. X. Teng, Josh L. Hayes, Susanna F. Jenkins, Mathis Joffrain, Eisuke Fujita, John Wardman, Setsuya Nakada, Yousuke Miyagi, Tomohiro Kubo

P02

Volcanic Hazard Risk Assessment at Ski Resorts Located on Active Snow-clad Volcanoes in Northeast Japan

Nanako Tanaka, Kyoko Kataoka

P03

Quantifying spatial distribution of exposure to explore variability in impacts of column-collapse pyroclastic flows: case study at Awu volcano, Indonesia

Ailsa K. Naismith, Susanna Jenkins, Christina Widiwijayanti, Heruningtyas Desi Purnamasari, Ahmad Basuki, Kushendratno, Edi Prantoko, Nugraha Kartadinata, Benjamin Clarke

Session D: *Volcanic Processes*

P13

Impact of Vesicle Network Changes on Infiltration Dynamics in Post-Eruptive Pumice

Sho Sawada, Christopher Gomez, Takashi Koi, Ben Kennedy

P14

Quantitative Evaluation of Tephra Dispersal Parameters Using a New Tephra Simulation Code (TWICE) and Walker Diagram

Toshitaka Sakai, Yuta Mitsui, Kazutaka Mannen

P15

Material science analyses of rootless tephra far-sighting future Mars landing mission

Ryo Kudo, Rina Noguchi

P16

Multivariate analyses of rootless cones for a simple understanding of volcanic eruption processes

Kota Abe, Rina Noguchi

P17

Sedimentary facies, chemical composition and physical properties of volcanic debris avalanche deposits: the Okinajima debris avalanche at Mt. Bandai, Fukushima Prefecture, northeast Japan

So Kobayashi, Kyoko Kataoka, Atsushi Urabe

P18

Flow characteristics of the 1926 lahar at Mt. Tokachi based on observations and grainsize analysis

Kosei Iida, Kae Tsunematsu, Kyoko Kataoka, Chiharu Tomijima, Eiichi Sato

Oral presentations

Session A: *Exposure, Preparedness, and Risk Reduction*

Chair: Lara Mani

O03

13:30–13:50 *Rebuilding Lives on Lava: The Dynamic Forces Shaping Resettlement in Post-Eruption Goma*

Blaise Mafuko Nyandwi, **Lara Mani**

O04

13:50–14:10 *Uncovering the Interplay Between Tectonism and Magmatism During the 2021 Nyiragongo Eruption (D.R. Congo)*

Thystere Matondo Bantidi, Takeshi Nishimura, Kazuyoshi Z. Nanjo, Bogdan Enescu, Takeo Ishibe, Georges Mavonga Tuluka

O05

14:10–14:25 *Mitigating Mazuku Hazards: Implementation and Effectiveness of Local Dry-Gas Degassing Measures in the Goma Area (Virunga Volcanic Province)*

Blaise Mafuko Nyandwi

Coffee break

14:25–14:40

Oral presentations

Session A: *Exposure, Preparedness, and Risk Reduction*

Chair: Lara Mani

O06

14:40–15:00 *From Maps to Models: Advancing Lahar Hazard Assessment at Ruapehu Volcano*

Jonathan Procter, Stuart Mead, Brian Perttu, Anke Zernack Mark Bebbington

O07

15:00–15:20 *Developing a National Volcano Model for New Zealand*

Josh L. Hayes, Graham S. Leonard, Thomas M. Wilson, Christina Magill, James H. Williams, Rebecca Fitzgerald, Heather Craig, Jan Lindsay, Stuart Mead, Mark Bebbington

O08

15:20–15:40 *Turning the World's Youngest Volcano Observatory into an Effective Tool for Risk Reduction in Argentina*

Pablo Forte, Sebastian García, Gregorio Boixart

O09

15:40–15:55 *Integrating AI-Driven Risk Metrics, Low-Cost Sensors, and Open-Access Training to Strengthen Volcanic Resilience in Resource-Limited Regions*

Gaurav Kumar

Break

15:55–16:00

Workshop

Session A: *Exposure, Preparedness, and Risk Reduction*

Chair: Lara Mani and Annemarieke Carey Buckley

16:00–17:45 *Volcano Ready: Risk Reduction in Practice*

Dispersal

17:45

Day 2: 9th October 2025

Oral presentations

Session B: *The Next Generation of Volcano Monitoring*

Chair: Jamie Farquharson

Keynote K02

09:00–09:40 *Results and reflections from a network of low-cost permanent ultraviolet cameras for sulphur dioxide measurements*

Tom. D. Pering (School of Geography and Planning, University of Sheffield, Sheffield, UK; VolcanoTech, Sheffield, UK), T. C. Wilkes, P. A. Nadeau, C. Kern, S. Hidalgo, F. Aguilera, S. Layana, A. Nurnaning, H. Humaida, A. Sakti, N. Varley

O10

09:40–10:00 *Enhancing Deep Learning Phase Detection Models with Multi-Station Context*

Abigail Robinson, James Hammond, Alex Steele, Sacha Lapins

O11

10:00–10:20 *A new generation of field rheometers and their potential for improving near real time lava flow monitoring and hazard assessment*

Stephan Kolzenburg, Martin A. Harris, M. Oryaëlle Chevrel

O12

10:20–10:40 *An underwater radiosonde to measure the level of radioactive radiation and radon concentration at the bottom of an acidic volcanic lake*

Vladimir Bolgov

Coffee break

10:40–11:10

Oral Presentation

Session D: *Volcanic Processes*

Chair: Kyoko Kataoka

O13

11:10–11:30 *Temporal Evolution of Crustal Stress at Volcanoes During Periods of Unrest*

Eric L. Newland, Chris. R. J. Kilburn

O14

11:30–11:50 *High-Resolution GBSAR and DEM Approaches for Detecting Long-Term Deformation of the Heisei-Shinzan Lava Dome*

Rikuto Daikai, Christopher Gomez, Yoshinori Shinohara, Norifumi Hotta

O15

11:50–12:10 *An overview of methods for dating Holocene lava flows at stratovolcanoes*

Chris Conway, Pedro Doll

Lightning talks

12:10–12:25 P04–P09; P19–P22

Lunchtime and poster session

12:25–13:40

Poster presentations

Session B: *The Next Generation of Volcano Monitoring*

P04

Cost-effective and modular instrumentation to study volcanic ash remobilisation by wind

Allan Fries, Lucia Dominguez, **Pablo Forte**, Sebastian Garcia, Eduardo Rossi, Costanza Bonadonna

P05

SpectroGas: the development and testing of a low-cost spectroscopic Multi-GAS

Rebecca A. England, Thomas C. Wilkes, **Tom D. Pering**

P06

Data Orchestration for Volcano Monitoring

Martanto, Corentin Caudron, Thomas Lecocq, Devy Kamil Syahbana, Andri Dian Nugraha

P07

Monitoring Volcanic Deformation Using InSAR: Deformation Time Series at Seasonally Snow-covered Volcanoes

Tianyuan Zhu, Juliet Biggs, Alison Rust, Milan Lazecký, Loreto Córdova

P08

From Scientists to Lodge Staff: Broadening Participation in Volcanic Gas Monitoring Using Passive Diffusive Tubes

Kazutaka Mannen

P09

Towards a Radio Network of Low-Cost Gas Monitoring Stations

Émilie Saucier, Stephan Kolzenburg

Session D: *Volcanic Processes*

P19

Origin of the Holocene red-brown strata under the Saitama plain, Saitama Prefecture, central Japan

Wahei Sato

P20

Stratigraphy and origin of lahar deposits distributed in the Yukawa River, the eastern foot of Adatara Volcano

Hiroto Sakamoto, Yoshitaka Nagahashi

P21

Estimation of Volcanic Sulfur Dioxide Emission Rates Using Satellite Observation and Forward Trajectory Analysis

Akihiro Hashimoto, Akimichi Takagi, Toshiki Shimbori

P22

Textural and Geochemical Insights into Ash-Dominated Deposits from Bromo Volcano, Indonesia

Aisyah Qurrataaini, Tsukasa Ohba, Jananda Nuralam Indriyanto, Takashi Hoshide

Oral presentations

Session D: *Volcanic Processes*

Chair: Jamie Farquharson

O16

13:40–14:00 *Magma fragmentation depth of large-scale and explosive phreatoplinian eruption*

Shohei Shibata

O17

14:00–14:20 *The Summer 2024 Lahar in the Tansandani of Unzen Volcano – Reflections on the role of local over-steepening*

Christopher Gomez, Rikuto Daikai, Norifumi Hotta,
Yoshinori Shinohara

O18

14:20–14:40 *Lahar chronology and associated eruption history during the past 32,000 years at Adatara volcano, northeast Japan*

Kyoko S. Kataoka, Atsushi Urabe, Yoshitaka Nagahashi

Coffee break

14:40–14:50

Workshop

Session B: *The Next Generation of Volcano Monitoring*

Chair: Tom Pering

14:50–16:50 *Volcano Monitoring Tools Workshop*

Dispersal

16:50

Day 3: 10th October 2025

Oral presentations

Session C: *Knowledge Sharing*

Chair: Jamie Farquharson

Keynote K03

09:00–09:40 *Activity of Asian Consortium of Volcanology (ACV)*

Eisuke Fujita (National Research Institute for Earth Science and Disaster Resilience, Tsukuba, Ibaraki, Japan; Asian Consortium of Volcanology), Benoit Taisne, Christina Widiwijayanti, Susanna Jenkins, Heruningtyas D. Purnamasari, Nugraha Kartadinata, Ma. Antonia Bornas, Perla J. Delos Reyes, Weiran Li, Cheng-Horng Lin, YaChuan Lai, Jiandong Xu, Sung-Hyo Yun, Cheolwoo Chang, Masato Iguchi

O19

09:40–10:00 *Advancing Volcanology Through Global Knowledge Sharing and Standardized Data Practices*

Christina Widiwijayanti, B. Taisne, N. T. Z. Win, T. Espinosa-Ortega, A. B. Aji, F. Costa, C. Newhall, A. Ratdompurbo, and WOVO observatories

O20

10:00–10:20 *The process of revising volcanic hazard maps and lessons learned and challenges in response during recent eruptions of Kirishima Volcano*

Yasuhisha Tajima

O21

10:20–10:40 *Development of Geological Hazards Information Database: New release of Geological Hazards Information System and Volcanic Hazards Information System*

Shinji Takarada, Joel Bandibas, Yuhki Kohno, Emi Kariya, Misato Osada, Fumihiko Ikegami

Coffee break

10:40–11:00

Oral presentations

Session C: *Knowledge Sharing*

Chair: Eisuke Fujita

O22

11:00–11:20 *MARABUMI: Bridging Researchers and Citizens through Geological Hazard Science Communication*

Aisyah Qurataaini, Astyka Pamumpuni, Salma Sakinah

O23

11:20–11:40 *Communicating Everyday and Potential Hazards to Tourists*

Denise M. Owen

Keynote K04

11:40–12:20 *ALVO: a regional platform for volcanic risk reduction in Latin America*

Pablo Forte (Observatorio Argentino de Vigilancia Volcánica (OAVV) – SEGEMAR, Argentina), Daniel Bertín, Silvana Hidalgo, Constanza Perales Moya

Lightning talks

12:20–12:25 P10–P12

Lunchtime and poster session

12:25–13:40

Poster presentations

Session C: *Knowledge Sharing*

P10

LaharDB: unlocking new insights into a destructive hazard through the creation of a global lahar database

Mieke Buckley, Susanna F. Jenkins, Jeremy C. Phillips, Jessie L. Willett, Jun Rui Chow, Aishling Barrett

P11

Experience of South Korea in the study of Volcanoes

Cheolwoo Chang, Sung-Hyo Yun

P12

Building a Japan Aotearoa Network for Catastrophic Eruption Planning

Christina Magill, Eisuke Fujita, Kosei Takishita, Yosuke Miyagi, Josh Hayes, Heather Craig, Kazutaka Mannen, Setsuya Nakada, Tomohiro Kubo, Yasunori Hada, Paul Jarvis

Oral presentations

Session C: *Knowledge Sharing*

Chair: Jamie Farquharson

O24

13:40–14:00 *Monitoring Volcanic Unrest in the Philippines in the Past 13 Years: Challenges to Effective Forecasting and Crisis Communication*

Ma. Antonia Bornas, Christian Joseph Clarito, Rudy Lacson Jr., Maricel Capa, Robert Garlope, Paul Karson Alanis, Dave Andrei Rivera, Melquiades Figueroa II

O25

14:00–14:20 *Four-Pillar Approach to Volcanic Disaster Mitigation Strategies in Indonesia*

M. Nugraha Kartadinata, Heruningtyas Desi Purnamasari, Oktory Prambada, Ardy Setya Prayoga, Sofyan Primulyana, Devy Kamil Syahbana, Priatin Hadi Wijaya

O26

14:20–14:40 *Assessment of volcanic eruption preparedness of communities: Taal Volcano as Case Study*

Perla J. Delos Reyes, Valerie Shayne V. Ofindo, Larissa Gabrielle O. Babon, Jesus Alexander T. Ines, Jeanne Myrtia M. Macalalad, Cheska Joi G. Vergara, Britt Erico R. Gajardo, Danikko John V. Rivera, Ma. Antonia V. Bornas, Teresito C. Bacolcol

Coffee break

14:40–15:10

Panel discussion

Session C: *Knowledge Sharing*

Chair: Eisuke Fujita

15:10–16:20 *Insights from Observatories*

Ma. Antonia Bornas, Mochamad Nugraha, Perla Delos Reyes, Josh Hayes, Heather Craig, Christina Magill, Eisuke Fujita, Christina Widiwijayanti

Closing remarks

16:20–16:25 Closing remarks

Jamie Farquharson

16:25–16:30 Closing remarks

Kuni Sueyoshi (Vice President of Niigata University)

Dispersal

16:30

Closing Dinner

19:00–21:00 (ANA Crowne Plaza hotel)
