

Day 3 (3 July)

Room 1

Analytical and numerical methods 1

Chair: Tung-Cheng Ho

9:00-9:15

e90130

The shortest travel-time tsunami ray tracing method and application to tsunamis near Japan

Tung-Cheng Ho

Disaster Prevention Research Institute, Kyoto University / Earthquake Research Institute, the University of Tokyo, Tokyo, Japan

9:15-9:30

e90042

Propagation and amplification of a strong bore with two-dimensionality in plane space

Hideo Matsutomi

Research and Development Initiative, Chuo University

9:30-9:45

e90035

Directivity of tsunami wave energy radiation

Andrey G. Marchuk

Information Technologies Department, Novosibirsk State University, Novosibirsk, Russia / Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk Russia

9:45-10:00

e90024

The super-rapid modeling of tsunami propagation using FPGA hardware

Mikhail Lavrentiev

Faculty of Information Technologies, Novosibirsk State University, Novosibirsk, RF

Analytical and numerical methods 2

Chair: Tung-Cheng Ho

10:15-10:30

e90132

A numerical simulation for tsunamis due to a landslide

Taro Kakinuma

Graduate School of Science and Engineering, Kagoshima University, Kagoshima, Japan

10:30-10:45

e90209

MPM-FEM hybrid analysis for tsunami induced by submarine landslide

Shaoyun Pan

Department of civil engineering, Tohoku university

- 10:45-11:00 **e90094**
Application of 3D slope stability analysis for simulation of historical submarine landslide tsunamis in Japan
Tsuyoshi Nagasawa
Pacific Consultants Co., Ltd.
- 11:00-11:15 **e90076**
Submarine landslide source modeling using 3D slope stability analysis method for 2018 Palu-Sulawesi tsunami
Chatuphorn Somphong
International Research Institute for Disaster Science, Tohoku University, Miyagi, Japan

Poster Presentation Viewing

- 11:30-12:30 **Poster Presentation Viewing in front of Room2**

Analytical and numerical methods 3

Chair: Utku Kanoglu

- 14:00-14:15 **e90154**
Focusing of finite-crested long waves propagating over a uniformly sloping beach
Utku Kanoglu
Department of Engineering Sciences, Middle East Technical University, Ankara, Turkey
- 14:15-14:30 **e90155**
Analytical estimation of tsunami runup
Baran Aydin
Department of Civil Engineering, Adana Alparslan Turkes Science and Technology University
- 14:30-14:45 **e90156**
Tsunami maximum runup and focusing through earthquake source parameters
Naeimeh Sharghivand
Department of Engineering Sciences, Middle East Technical University, Ankara, Turkey
- 14:45-15:00 **e90109**
Combined 3D/2D potential tsunami model (CPTM): Verification and applications
Kirill A. Sementsov
Division of Geophysics, department of physics of Sea and Inland water, Lomonosov Moscow State University

Hazard and risk assessment 1

Chair: Shaun Williams

15:15-15:30

e90183

Hazard and risk characteristics of tsunamis sourced at the Northern Tonga Trench: Insights from recent case studies of Samoa

Shaun Williams

Natural Hazards Centre, National Institute of Water and Atmospheric Research (NIWA), Christchurch, Aotearoa New Zealand

15:30-15:45

e90226

The results of numerical modelling of the 1983 and 1993 tsunamis in the sea of Japan on the Russian Coast

Elizaveta Tsukanova

Moscow Institute of Physics and Technology, Moscow, Russia

15:45-16:00

e90036

An effective method for eelgrass damage estimation using tsunami and sediment transport modeling

Hiroyuki Kimura

Department of Civil and Environmental Engineering, Graduate School of Engineering, Tohoku University, Sendai, Japan

16:00-16:15

e90195

High-resolution mapping of mangroves, siren networks and vulnerable settlements for mitigating tsunami risk in New Caledonia

Bruce Enki Oscar Thomas

Laboratoire d'Ecologie Marine Tropicale des Océans Pacifique et Indien (UMR 250 ENTROPIE), Institut de Recherche pour le Développement (IRD), Centre IRD de Nouméa, Nouvelle-Calédonie / Université Lumière Lyon 2, CNRS, UMR 5600, F-69676 Lyon Bron, Cedex 07, France / Institute of Geodesy (GIS), University of Stuttgart, Institute of Geodesy (GIS), Geschwister-Scholl-Str. 24, Stuttgart, Germany

Hazard and risk assessment 2

Chair: Shaun Williams

16:30-16:45

e90064

Probabilistic tsunami inundation assessment using mode decomposition method

Yo Fukutani

College of Science and Engineering, Kanto Gakuin University, Yokohama, Japan

16:45-17:00

e90240

Probabilistic tsunami risk assessment from incomplete intensity data

Ioanna Triantafyllou

Department of Geology and Geoenvironment, National and Kapodistrian University of Athens, Greece

17:00-17:15

e90111

**Flow characteristics influencing damage to port industries:
Case study of the 2011 Tohoku Tsunami**

Constance Chua

Earth Observatory of Singapore, Nanyang Technological University, Singapore / Asian
School of the Environment, Nanyang Technological University, Singapore

17:15-17:30

e90013

**Characteristics of building fragility curves for seismic and
non-seismic tsunamis**

Anawat Suppasri

International Research Institute of Disaster Science, Tohoku University

Closing

17:30

Alexander Rabinovich

Russian Academy of Sciences, Shirshov Institute of Oceanology

Room 2

Education and resilience 1

Chair: Syamsidik

- 9:00-9:15 **e90021**
From urban form analysis to metrics for enhancing tsunami evacuation: Lessons from twelve Chilean cities
Jorge Leon
Architecture, UTFSM, Valparaíso, Chile / CIGIDEN, Santiago, Chile
- 9:15-9:30 **e90214**
Bosai kaizen system: Development of real-time disaster information sharing system through co-creation with citizens
Yusuke Oishi
Fujitsu LTD.
- 9:30-9:45 **e90188**
Logistic regression modeling of occurrence of tsunami-induced fire based on the case of Great East Japan Earthquake
Takashi Oe
School of Engineering Department of Civil Engineering and Architecture, Nagoya University

Education and resilience 2

Chair: Syamsidik Syamsidik

- 10:15-10:30 **e90104**
Complexities of a long-term disaster recovery process: A study case from tsunami preparedness in Aceh-Indonesia after 15 years of the 2004 Indian Ocean Tsunami
Syamsidik
Tsunami and Disaster Mitigation Research Center, Universitas Syiah Kuala (USK)
- 10:30-10:45 **e90011**
Sustainability of disaster prevention education for elementary school students: Difference between the coastal and inland areas of Japan
Mari Yasuda
International Research Institute of Disaster Science, Tohoku University
- 10:45-11:00 **e90065**
Effectiveness measurement of 3DCG animations for tsunami disaster prevention education
Ryunosuke Tawatari
Tohoku Branch Office, Pacific Consultants Co., LTD., Japan

11:00-11:15

e90239

Tsunami risk as a social reality?

Irina Rafliana

Knowledge Cooperation and Sociology, German Development Institute DIE and
University of Bonn / Indonesian Institute of Sciences LIPI Indonesia

Poster Presentation Viewing

11:30-12:30

Poster Presentation Viewing in front of Room2

Education and resilience 3

Chair: Erick Mas

14:00-14:15

e90170

Optimization of tsunami evacuation with reinforcement learning algorithm

Erick Mas

International Research Institute of Disaster Science, Tohoku University, Sendai, Japan

14:15-14:30

e90137

Assessment of tsunami evacuation plan in Palu Bay

Taro Arikawa

Department of Civil and Environmental Engineering, Chuo University

14:30-14:45

e90062

Numerical analysis of evacuation start during the 2018 Palu tsunami, Indonesia

Karina Aprilia Sujatmiko

Graduate School of Societal Safety Sciences, Kansai University

14:45-15:00

e90187

Effect of tsunami shelters for volcanic tsunami in Pandeglang, Banten, Indonesia, with agent-based modelling

Han Soo Lee

Graduate School of Advanced Science and Engineering, Hiroshima University

Meteotsunamis 1

Chair: Yuichiro Tanioka

15:15-15:30

e90247

Development of quantitative evaluation method for real-time forecast of meteorite impact tsunami

Naotaka Yamamoto Chikasada

NIED, Tsukuba, Japan

- 15:30-15:45 **e90082**
Tsunami wave height estimation along the coast based on tsunami observation and data assimilation by using oceanographic radar on the Southern Coast of Java, Indonesia
Muhammad Irham Sahana
 Department of Civil and Environmental Engineering, Ehime University, Matsuyama, Japan
- 15:45-16:00 **e90164**
Enhancing great lakes coastal flooding forecasting for meteorologically-induced tsunamis
Pengfei Xue
 Department of Civil and Environmental Engineering, Michigan Technological University
- 16:00-16:15 **e90160**
On the greenspan resonance of meteotsunamis in the Yellow Sea - insights from the newly discovered 2009 event
Jihwan Kim
 IPMA, Portuguese Institute of Marine and Atmosphere, Lisbon, Portugal

Meteotsunamis 2
Chair: Yuichiro Tanioka

- 16:30-16:45 **e90242**
A three-dimensional theory for meteorological tsunami generation and propagation
Tatsuhiko Saito
 National Research Institute for Earth Science and Disaster Resilience, Tsukuba, Japan
- 16:45-17:00 **e90219**
The adriatic meteotsunamis in orography-free, flat bathymetry and warming climate conditions
Ivica Vilibic
 Institute of Oceanography and Fisheries
- 17:00-17:15 **e90230**
Multiscale meteorological characteristics of meteotsunami with urban flood in Nagasaki on 21 March 2019
Kenji Tanaka
 Department of Global Environment Studies, Hiroshima Institute of Technology
- 17:15-17:30 **e90245**
The extreme meteotsunami/storm surge event of 12-16 October 2016 on the west coast of Vancouver Island, British Columbia caused by typhoon "Songda"
Alexander Rabinovich
 Russian Academy of Sciences, Shirshov Institute of Oceanology