# Satu tahun dari itu. LMU untuk A dan CCVGHM ZIII.11.28 (kamis) 9:30-

Co-organized by: Ministry of Research and Technology of Indonesia(RISTEK) and Japan Science and Technology Agency (JST) Sponsored by: Embassy of Japan in Indonesia



スンダ海峡津波に関する国際緊急共同研究・調査支援プログラム





# Venue



Jl. Medan Merdeka Sel. No.11, RT.11/RW.2, Gambir, Kecamatan Gambir, Kota Jakarta Pusat, Daerah Khusus Ibukota Jakarta

### J-RAPID Report Symposium for Anak Krakatau volcano eruption and Sunda Strait tsunami

### November 28<sup>th</sup> , 2019 Venue, DIPI, Jakarta, Indonesia

Co-organized by: Ministry of Research and Technology of Indonesia(RISTEK) and Japan Science and Technology Agency (JST)

TIME	
9:00 - 9:30	Registration
0.20 0.25	Welcome Remarks Dr. Teguh Rahardjo
9.30 - 9.33	the Executive Director, Indonesian Science Fund (DIPI)
	Opening Remarks Prof. Ocky Karna Radjasa
9:35 - 9:40	Director of research and community services,
	Ministry of Research and Technology of Indonesia(RISTEK)
9.40 - 9.45	Opening Remarks Ms. Yoshiko Shirokizawa
7.40 7.45	Vice President, Japan Science and Technology Agency, Japan (JST)
	Photo session
	Presentations
10.00 12.00	Theme 1: Survey of Tsunami Disaster and Response of Residents
10.00-12.00	Theme 2: Investigation on volcanic activity and sector collapse inducing the Sunda Strait
	tsunami in Indonesia
12:00 - 13:00	Networking Lunch
	Theme 3: Mapping Tsunami Disaster Impact of Indonesia by Satellite Remote Sensing
13:00-15:00	Theme 4: Urgent survey of coastal response in beach and coral reefs to the Sunda Strait
	tsunami
15:00 - 15:20	Tea Break
	Theme 5: Seismic, tsunami and satellite image analyses to study the generation
15:20 - 17:20	mechanism of the 2018 Sunda Strait tsunami
	Theme 6: Elucidation of Generation Mechanism of Tsunami due to Aseismic Slip
17:20-17:35	Wrap Up
	Closing remarks from JST
17.25 17.40	Dr. Yoshimori Honkura
17.33-17.40	International Science and Technology Cooperation Promotion Committee, Japan Science
	and Technology Agency, Japan (JST)
18:15 - 20:00	Networking Dinner(Hotel Sari Pacific Jakarta)

Na	Desceral Title	Research Leader in Japan
INO.	Research Thie	Research Leader in Indonesia
		Dr.Hendra Achiari ,Department Coordinator
		Assistant Professor ,Department of Ocean Engineering,
		Sumatra Institute of Technology
1	Survey of Tsunami Disaster and	Dr. Tomoya, Shibayama, Professor,
1	Response of Residents	Department of Civil and Environmental Engineering,
		Waseda University
		(Presenter)Dr.Ryota Nakamura, Assistant Professor
		Faculty of Engineering, Niigata University
		Dr.Kasbani, Head of Center for Volcanology and
		Geological Hazard Mitigation
		Ministry of Energy and Mineral Resources, Geological
		Agency
		(Presenter) Dr. Hendra Gunawan, Head of Volcano
	Investigation on volcanic activity and	Hazard Mitigation Division
2	sector collapse inducing the Sunda	Dr. Masato Iguchi, Professor
2	Strait tsunami in Indonesia	Disaster Prevention Research Institute, Kyoto University
		(Presenter1)Dr. Fukashi Maeno, Professor
		Earthquake Research Institute, The University of Tokyo
		(Presenter2)Dr. Hiroshi Inoue ,Principal Research
		FellowMulti-hazard Risk Assessment Research Division,
		National Research Institute for Earth Science and Disaster
		Resilience (NIED)
		Dr.Rokhis Khomarudin, Professor
		Remote Sensing Application Center, National Institute of
	Mapping Tsunami Disaster Impact of	Aeronautics and Space (Lembaga Penerbangan dan
3	Indonesia by Satellite Remote	Antariksa Nasional - LAPAN)
	Sensing	Dr. Shunichi Koshimura, Professor
		International Research Institute of Disaster Science,
		Tohoku University
		Dr.Eko Yulianto, Director
		Research Center for Geotechnology, Indonesian Institute
	Urgent survey of coastal response in	of Sciences (LIPI)
4	beach and coral reefs to the Sunda	(Presenter)Dr. Purna Putra, Researcher Fellow
	Strait tsunami	Research Center for Geotechnology, LIPI
		Dr. Yuichi Nishimura, Associate Professor
		Graduate School of Science, Hokkaido University

### List of research subjects and speakers

		Dr.Sri Widiyantoro, Professor
	5 Seismic, tsunami and satellite image analyses to study the generation mechanism of the 2018 Sunda Strait tsunami	Geophysical Department, Bandung Institute of
		Technology
5		(Presenter)Dr.David Sahara, Assistant Professor
		Geophysical Engineering Department, ITB
		Dr. Shingo Watada, Associate Professor
		Earthquake Research Institute, The University of Tokyo
		Dr.Abdul Muhari, Head, Coastal Disaster Mitigation
		Division,
6	Elucidation of Generation Mechanism	The Ministry of Marine Affairs and Fisheries
0	of Tsunami due to Aseismic Slip	Dr. Taro Arikawa, Professor
		Department of Civil and Environmental Engineering,
		Chuo University

Venue, DIPI, Jakarta, Indonesia

DIPI (Dana Ilmu Pengetahuan Indonesia, Indonesian Science Fund) Jalan Medan Merdeka Selatan No.11 Jakarta Pusat 10110 Gedung Perpustakaan Nasional Republik Indonesia Lantai 17 National Library Building, 17th floor インドネシア共和国国立図書館ビル17階

[MAP from Airport]

[Neighborhood map]



N.	Descende Tidle	Research Leader in Japan
INO.	Research Title	Research Leader in Indonesia
		Dr. Shibayama Tomoya, Professor,
		Department of Civil and Environmental Engineering,
	Surrey of Taynami Disaster and	Waseda University
1	Survey of Isunami Disaster and	Dr.Hendra Achiari, Department Coordinator ,assistant
	Response of Residents	professor
		Department of Ocean Engineering, Sumatra Institute of
		Technology
		Dr. Masato Iguchi ,Professor
	Investigation on valuania activity and	Disaster Prevention Research Institute, Kyoto University
2	investigation on volcanic activity and	Dr.Kasbani, Head of Center for Volcanology and
2	Strait tsunami in Indonesia	Geological Hazard Mitigation
	Strait isunanni in muonesia	Ministry of Energy and Mineral Resources, Geological
		Agency
		Dr. Shunichi Koshimura ,Professor
		International Research Institute of Disaster Science,
	Mapping Tsunami Disaster Impact of Indonesia by Satellite Remote Sensing	Tohoku University
3		Dr.Rokhis Khomarudin, Ph.D., Professor
		Remote Sensing Application Center, National Institute of
		Aeronautics and Space (Lembaga Penerbangan dan
		Antariksa Nasional - LAPAN)
		Dr. Yuichi Nishimura, Associate Professor
	Urgent survey of coastal response in	Graduate School of Science, Hokkaido University
4	beach and coral reefs to the Sunda	Dr.Eko Yulianto, Director
	Strait tsunami	Research Center for Geotechnology, Indonesian Institute
		of Sciences (LIPI)
	Saismic trunami and satallita image	Dr. Shingo Watada ,Associate Professor
	analyzes to study the concretion	Earthquake Research Institute, The University of Tokyo
5	mechanism of the 2018 Sunda Strait	Dr. Sri Widiyantoro, Professor
	tsunami	Geophysical Department, Bandung Institute of
	banam	Technology
		Dr. Taro Arikawa ,Professor
		Department of Civil and Environmental Engineering,
6	Elucidation of Generation Mechanism	Chuo University
0	of Tsunami due to Aseismic Slip	Dr. Abdul Muhari, Head, Coastal Disaster Mitigation
		Division,
		The Ministry of Marine Affairs and Fisheries

### Attachment 1 List of research subjects (English Version)

### 添付1 研究課題一覧

課題名一覧		日本側 研究代表者 インドネシア側 研究代表者	所属・役職
1	スンダ海峡津波の 被害と住民の対応 の調査	柴山 知也 ヘンドラ・アチア リ	早稲田大学 理工学術院 教授 スマトラエ科大学海洋工学科 学科長
2	インドネシア・ス ンダ海峡津波を誘 発した火山活動と 崩壊メカニズムに	井口 正人	京都大学 防災研究所 教授 エネルギー鉱物資源省(MEMR)
	関する研究 リモートセンシン グによる津波被害	越村 俊一	地質庁火山地質災害軽減センター長 東北大学 災害科学国際研究所 教授
3	の把握と脆弱性評価	ロキス・コマルデ ィン	国立航空宇宙研究所(LAPAN) リモートセンシング応用センター センター長
4	スンダ海峡津波が サンゴ礁海岸域に 及ぼした影響につ	西村 裕一	北海道大学 理学研究院 准教授 インドネシア科学院(LIPI) 地質工学
	いての緊急調査	エコ・ユリアント	研究センターセンター長
	地震・津波・衛星 画像データ解析に	綿田 辰吾	東京大学 地震研究所 准教授
5	よる2018年ス ンダ海峡津波発生 メカニズムの解明	スリ・ウィディヤ ントロ	バンドンエ科大学 地球物理学部 教授
	非地震性津波の発	有川 太郎	中央大学 理工学部 教授
6	生メカニズムの解 明	アブドゥル・ムハ リ	海洋水産省(ККР) 沿岸防災部 部長

### Group No.1:

### Indonesia Team

Name	Title	Organization
Hendra Achiari	Coordinator and Dr.	Sumatra Institute of Technology
Nanda Nurisman	Lecturer	Sumatra Institute of Technology
Mustarakh Gelfi	Lecturer	Sumatra Institute of Technology
Trika Agnestasia Tarigan	Lecturer	Sumatra Institute of Technology
Elsa Rizkiya Kencana	Lecturer	Sumatra Institute of Technology
Muhammad Aldhiansyah Rifqi Fauzi	Lecturer	Sumatra Institute of Technology
Satriyo Panalaran	Lecturer	Sumatra Institute of Technology

### Japan Team

Name	Title	Organization
Tomoya Shibayama	Professor	Waseda University
Tomoyuki Takabatake	Assistant Professor	Waseda University
Miguel Esteban	Professor	Waseda University
Takahito Mikami	Associate Professor	Tokyo City University
Ryota Nakamura	Assistant Professor	Niigata University
Emiko Matsumaru	Research Assistant	Waseda University
Kotaro limura	Mater's Course Student	Waseda University
Yuta Nishida	Mater's Course Student	Waseda University

### Group No.2:

### Indonesia Team

Name	Title	Organization
Kasbani	Head of CVGHM	Center for Volcanology and Geological Hazard Mitigation
Hendra Gunawan	Head of Division	Center for Volcanology and Geological Hazard Mitigation
Kristianto	Researcher	Center for Volcanology and Geological Hazard Mitigation
Hetty Triastuty	Researcher	Center for Volcanology and Geological Hazard Mitigation
Karyono	Researcher	National Earthquake and Tsunami Warning Center

### Japan Team

Name	Title	Organization
Masato Iguchi	Professor	Kyoto University
Haruhisa Nakamichi	Associate Professor	Kyoto University
Masumi Yamada	Assistant Professor	Kyoto University
Setsuya Nakata	Director-General	National Research Institute for Earth Science and Disaster Resilience
Hiroshi Inoue	Senior Researcher	National Research Institute for Earth Science and Disaster Resilience
Fukashi Maeno	Associate Professor	University of Tokyo
Masashi Nagai	Research Fellow	National Research Institute for Earth Science and Disaster Resilience
Takayuki Kaneko	Assistant Professor	University of Tokyo

### Group No.3:

### Indonesia Team

Name	Title	Organization
Rokhis Khomarudin	Head of Center	National Institute of Aeronautics and Space
Fajar Yulianto	Researcher	National Institute of Aeronautics and Space
Udhi Catur Nugroho	Researcher	National Institute of Aeronautics and Space
Abdul Muhari	Division Leader	Ministry of Marine Affairs and Fisheries

### Japan Team

Name	Title	Organization
Shunichi Koshimura	Professor	Tohoku University
Masashi Matsuoka	Professor	Tokyo Institute of Technology
Erick Mas	Associate Professor	Tohoku University
Luis Moya	Researcher	Tohoku University
Naoto Yokoya	Unit Leader	RIKEN
Bruno Adriano	Researcher	RIKEN

### Group No.4:

### Indonesia Team

Name	Title	Organization
Eko Yulianto	Director	Research Center for Geotechnology
Purna Sulastya Putra	Research Fellow	Research Center for Geotechnology

### Japan Team

Name	Title	Organization
Yuichi Nishimura	Associate Professor	Hokkaido University
Takashi Ishizawa	Researcher	Hokkaido University
Takashi Chiba	Assistant Professor	Akita Prefectural University
Linda Nita Ratnasari	Master's Course Student	Hokkaido University
Tsuyoshi Watanabe	Senior Lecturer	Hokkaido University
Atsuko Yamazaki	Assistant Professor	Kyushu University
Takaaki Watanabe	Researcher	Hokkaido University
Yuri Sasaki	Administrative Assistant	Hokkaido University

### Group No.5:

#### Indonesia Team

I L			
	Name	Title	Organization
Sri Wid	iyantoro	Professor	Bandung Institute of Technology
David F	P. Sahara	Lecturer	Bandung Institute of Technology
Mirzam	Abdurrachman	Lecturer	Bandung Institute of Technology
Hendra	Gunawan	Research Associate	Geological Agency
Andri D	ian Nugraha	Associate Professor	Bandung Institute of Technology
Zulfakri	za	Lecturer	Bandung Institute of Technology

### Japan Team

Name	Title	Organization
Shingo Watada	Associate Professor	University of Tokyo
Hiroshi Yarai	Laboratory Manager	Geospatial Information Authority of Japan
Tomokazu Kobayashi	Chief Researcher	Geospatial Information Authority of Japan
Mulia Iyan	Researcher	University of Tokyo
Ho Tungcheng	Researcher	University of Tokyo

### Group No.6:

Indonesia Tear	m	
Name	Title	Organization
Abdul Muhari	Head of Coastal Disaster Mitiga Division	tion Ministry of Marine Affairs and Fisheries
Bagus Afriyanto	Researcher	Ministry of Marine Affairs and Fisheries
Haris D Nugroho	Researcher	Naval Hydrographic and Oceanographic Center
Estu Kriswati	Researcher	Geological Agency of Indonesia
Antonius B. Wijanarto	Researcher	Indonesian Spatial Agency,
Mohammad Farid	Assistant Professor	Bandung Institute of Technology

### 🛑 🛛 Japan Team

Name	Title	Organization
Taro Arikawa	Professor	Chuo University
Fumihiko Imamura	Professor	Tohoku University
Anawat Suppasri	Associate Professor	Tohoku University
Tsuyoshi Haraguchi	Associate Professor	Osaka City University
Ikuo Abe	Professor	Tokoha University
Masashi Watanabe	Assistant Professor	Chuo University

### Organizer, Distinguished guest

## Dr. Ocky Karna Radjasa

Director Research and Community Services, Ristekdikti

INDONESIA

### Profile

Prof. Radjasa is currently responsible for formulating, coordinating, and synchronizing policy implementation of research at Ristekdikti. He also leads a directorate that overseeing monitoring dan evaluation research projects and community service programmes. Prior to joining the Ministry, he is a senior lecturer and researcher on Marine Microbiology at Diponegoro University in Semarang, Indonesia. He obtained his Bachelor of Science degree in environmental science from the Soedirman University, Purwokerto, then studied at McMaster University, Hamilton, Ontario, Canada where he had his M.Sc in Biology in 1994. He was also a fellow at Ocean Research Institute (ORI), the University of Tokyo, and received a Ph.D in Aquatic Biosciences in 2001. (ocky.radjasa@ristekdikti.go.id)

### Organizer, Distinguished guest

### Ms. Yoshiko Shirokizawa

### Vice President, Japan Science and Technology Agency (JST)





Profile

As a Vice President of the Japan Science and Technology Agency (JST), Yoshiko Shirokizawa promotes a wide range of activities, including research and development programs focused on technology transfer, international collaborative programs, and sustainable development goals (SDGs), etc., in order that Japanese S&T research outcomes lead to innovation. In her 30 years of experience at JST, Ms. Shirokizawa has managed various projects. Bachelor's in Biology, Tohoku University.

### Yoshimori HONKURA, Ph.D.

Professor Emeritus, Tokyo Institute of Technology



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Positions	
1974-	Doctor Degree Course, Department of Geophysics, Graduate School of University of Tokyo
1974 - 1975	Post-Doctoral Fellow, Department of Energy, Mines and Resources (Canada)
1975 - 1980	Research Associate, University of Tokyo
1980 - 1993	Associate Professor, Tokyo Institute of Technology
1993 - 2011	Professor, Tokyo Institute of Technology
1999 - 2001	Dean, Faculty of Science, Tokyo Institute of Technology
2004 - 2007	Vice President, Tokyo Institute of Technology
2011 -	Professor Emeritus, Tokyo Institute of Technology

### Society Activity

1982 - 1997	Journal of Geomagnetism and Geoelectricity: Editor
1997 - 1998	Journal of Geomagnetism and Geoelectricity: Editor-in Chief
1990	Western Pacific Geophysics Meeting: Program Committee Chairman
1994 - 2002	International Association of Geomagnetism and Aeronomy, WG I-2: Member
1996	13th Workshop on Electromagnetic Induction in the Earth: Local Organizing Committee Chairman
1996 - 1997	American Geophysical Union, Regional Advisory Committee: Member
1998 - 2004	Earth, Planets and Space: Editor-in-Chief
2006 - 2007	OECD, Global Science Forum "Earthquake Science and Its Contribution to Society": Delegate

### Others

-Program Officer of SATREPS, JST

-Program Officer of e-ASIA JRP(Disaster Risk Reduction and Management), JST

-International Science and Technology Cooperation Promotion Committee, JST

### About J-RAPID

The eruption of Anak Krakatau and the tsunami in the Sunda Strait, which occurred on December 22, 2018, caused considerable damage to Indonesia. With the cooperation of RISTEKDIKTI, JST has publicly offered a J-RAPID fund for this major disaster. Researchers from Japan and Indonesia have since cooperated, and international joint research has started on six research themes. Volcanoes similar to Anak Krakatau can be found all over the world, and research on the causes, damage, and effects is extremely valuable. We hope this symposium will help bridge to full-scale research with outcomes that will benefit Indonesian society and others that deal with volcanoes.

### Hendra Achiari, Dr.Eng.



Assistant Professor, Sumatera Institute of Technology (ITERA)

	INDONESIA
Positions	
1995	Bachelor Degree in Civil Engineering, Department of Civil Engineering, Bandung Institute of Technology (ITB), Indonesia
1999	Master of Engineering in Civil Engineering, Department of Civil Engineering, Bandung Institute of Technology (ITB), Indonesia
2007	Doctor of Engineering in Civil Engineering, Yokohama National University (YNU), Japan
1999 - now	Lecturer, Bandung Institute of Technology (ITB)
2018 - now	Head of Ocean Engineering Program, Sumatera Institute of Technology (ITERA)

#### Society Activity

2010 - 2011 Association of Indonesian Oceanology scholars (ISOI)

2014 - now Association of Indonesian Coastal Engineers (HATPI)

2018 - 2019 Journal Coastal Research (JCR): Peer Reviewer

#### International Collaborations

- 2005: member of Post Tsunami survey team between YNU Japan and ITB Indonesia, in Pangandaran, Cilacap and south of West Java, Indonesia, led by Prof. Tomoya Shibayama
- 2009: Postdoctoral fellow internship funded by Ministry of Education Indonesia for 3 months in Coastal Laboratory – Yokohama National University Japan, Collaboration with Prof. Jun Sasaki.
- 2010: Member of Post Tsunami survey team for Mentawai disaster assessments, collaboration between YNU-Waseda University-Japan and ITB Indonesia, led by Prof. Tomoya Shibayama from Waseda University Japan.
- 2012 2016: member of International research collaboration between The University of Tokyo, Yokohama National University and ITB Indoensia, led by Prof. Jun Sasaki
- 2018: member of Post Tsunami survey team between Waseda University Japan and ITB Indonesia, in Palu and Don ggala Central Sulawesi, led by Prof. Tomoya Shibayama
- 2019: member of Post SundaTsunami survey team between Waseda University Japan, ITB and ITERA Indonesia, in South of Lampung Province and Banten Province, led by Prof. Tomoya Shibayama

### Ryota Nakamura, Dr.(Eng)

Assistant Professor, Niigata University



JAPAN	
Positions	
2013 - 2014	Master Degree Course, Department of Civil and Environmental Engineering, Waseda University
2014 - 2017	Doctor Degree Course, Department of Civil and Environmental Engineering, Waseda University
	(Supervisor: Prof. Tomoya Shibayama)
2016 - 2017	Research Fellowship for Young Scientists (DC2), Japan Society for the Promotion of Science
2017 - 2018	Assistant Professor (5-year contract), Department of Architecture and Civil Engineering, Graduate Schoo
	of Engineering, Toyohashi University of Technology
2019 -	Assistant Professor (tenured, principal investigator), Civil Engineering Program, Faculty of Engineering,
	Niigata University

### Society Activity

2018 -	Journal of Japan Society of Civil Engineers, Ser. B3 (Ocean Engineering): Peer reviewer sub-committee
2017 -	Coastal Engineering Committee: Coastal Climate change sub-committee
2016 -	Peer review in Coastal Engineering Journal (Taylor & Francis), Water (MDPI), Progress in Earth Science
	(Springer) and so on.

### Recent Publications

- Ryota Nakamura, Tomoya Shibayama, Miguel Esteban, Takumu Iwamoto (2016): Future typhoon and storm surges under different global warming scenarios: case study of typhoon Haiyan, Natural Hazards, 82(3), 1645-1681.
- Ryota Nakamura, Martin Mäll, Tomoya Shibayama (2019): Street-scale storm surge load impact assessment using fine-resolution numerical modelling: a case study from Nemuro, Japan, Natural Hazards, 99(1), 391–422.
- Martin Mäll, Ülo Suursaar, Ryota Nakamura, Tomoya Shibayama (2017): Modelling a storm surge under future climate scenarios: case study of extratropical cyclone Gudrun (2005), Natural Hazards, 89(3), 1119-1144.
- Tomoyuki Takabatake, Martin Mäll, Miguel Esteban, Ryota Nakamura, Thit Kyaw, Hidenori Ishii, Justin Valdez, Yuta Nishida, Fuma Noya, Tomoya Shibayama (2018): Geosciences, 8(11), 412.
- Takahito Mikami, Tomoya Shibayama, Miguel Esteban, Tomoyuki Takabatake, Ryota Nakamura, Yuta Nishida, Hendra Achiari, Abdul Gafur Marzuki, Muhammad Fadel Hidayat Marzuki, Jacob Stolle, Clemens Krautwald, Ian Robertson, Rafael Aránguiz, Koichiro Ohira (2019): Pure and Applied Geophysics, Pure and Applied Geophysics, 176(8), 3291-3304.

### Tomoya SHIBAYAMA, Ph.D.

Professor, Waseda University



JAPAN	
Positions	
1981 – 1985	Research Associate, Department of Civil Engineering, University of Tokyo
1985 – 1986	Assistant Professor, Department of Civil Engineering, University of Tokyo
1986 – 1987	Associate Professor, Department of Civil Engineering, University of Tokyo
1990 – 1991	Associate Professor, Division of Water Resources Engineering, Asian Institute of Technology seconded
	the Japanese Government
1987 – 1997	Associate Professor, Department of Civil Engineering, Yokohama National University
1997 –2009	Professor, Department of Civil Engineering, Yokohama National University
2009 – present	Professor, Department of Civil and Environmental Engineering, Waseda University. Research interests
	teaching subjects include Tsunami and Storm Surge Disaster, Coastal and Ocean Engineering
2009 – present	Professor Emeritus at Yokohama National University
2018 – present	Director, Research Institute for Future Sustainable Society, Faculty of Science and Engineering, Was
	University
2018 – present	Director, Incubation Center, Waseda University

#### Society Activity

- 2004 2008 Editor in Chief, Coastal Engineering Journal (CEJ) published from World Scientific and Japan Society of Civil Engineers
- 2013 -present Advisor to Ocean Engineering Committee, Japan Society of Civil Engineers
- 2014 -present Advisor to Coastal Engineering Committee, Japan Society of Civil Engineers
- 2017 2019 President, Japan Federation of Ocean Engineering Societies
- 2019 -present President, Japan Association of Coastal Zone Studies

Honors and Recognitions etc

2019 Awardee, Hamaguchi Award for International Tsunami Study

#### Publication of Books

Shibayama, T., Coastal Processes—Concepts of Coastal Engineering and Their Applications to Multifarious Environments, 2009, World Scientific, 215p.

Esteban, M., Takagi, H., Shibayama, T. (editors) (2015): Handbook of Coastal Disaster Mitigation for Engineers and Planners, Paperback ISBN: 9780128010600, eBook ISBN: 9780128012703, Elsevier, 788p.

MOOC (Massive Open Online Course)

"Tsunamis and Storm Surges: Introduction to Coastal Disasters" (Jan. 18, 2016 ----present) https://www.edx.org/course/tsunamis-storm-surges-introduction-wasedax-cosdis101x

## Fukashi MAENO, Ph.D.

Associate Professor, Earthquake Research Institute, University of Tokyo



JAI	PAN
Positions	
2003 - 2006	Doctor Degree Course, Department of Earth Sciences, Graduate School of Science, Tohoku University
2007 - 2007	Post-Doctoral Fellow, Earthquake Research Institute, University of Tokyo
2007 - 2017	Assistant Professor, Earthquake Research Institute, University of Tokyo
2010-2012	JSPS Postdoctoral Fellow, Department of Earth Sciences, University of Bristol
2017 -	Associate Professor, Earthquake Research Institute, University of Tokyo

### Society Activity

2010 - 2016	Editor of 'Bulletin of the Volcanological Society of Japan'
2013 - 2019	Member of Steering Committee of journal 'Earth Planets and Space'
2015 -	Member of Section board of Solid Earth Science section of Japan Geoscience Union
2017 -	Member of Review Committee on value and conservation of Nishinoshima
2018 -	Member of Survey Planning Committee for Cabinet Office on Volcanic Disaster Prevention
2019 -	Member of Coordinating Committee for Prediction of Volcanic Eruptions

### Honors and Recognitions etc

2008: Outstanding Research Award for young scientists from the Volcanological Society of Japan.

- 2008: George Walker Award for young scientist from International Association of Volcanology and Chemistry of the Earth's Interior
- 2017: Outstanding Paper Award from the Volcanological Society of Japan [Maeno et al. Earth Planets and Space, 68, 82, 2016.]
- 2018: Outstanding Paper Award from the Volcanological Society of Japan [Kaneko et al. Earth Planets and Space, 68, 72, 2016]

## Hiroshi INOUE, Dr.Sci.



Principal Research Fellow, National Research Institute for Earth Science and Disaster Resilience (NIED)

JAPAN	
Positions	
1979-	Graduate School of Department of Earth Science, Nagoya University.
1989	Dr. Science in seismology, Nagoya University
1989-	Researcher, IISEE, Building Research Institute
1996 -	Principal Researcher, Earthquake Research Division, National Research Institute for Earth Science
	and Disaster Prevention(NIED)
2015-	Principal Research Fellow, Multi-Hazard Risk Assessment Research Division, NIED

Current research projects:

Evaluation Hazard and Risk of Natural Disaster: International Expansion Component (NIED)

Evaluation and Mitigation of Seismic Risk for Composite Masonry Buildings in Bhutan (SATREPS, JST/JICA)

Development of Information Gathering and Utilization Systems using Small UAV for Disaster Risk Assessment, Monitoring and Response (e-ASIA, JST) Group 3 / Presenter / Principal Investigator

### Dr. Muhammad Rokhis Khomarudin

Director, Remote Sensing Application Center, LAPAN



### INDONESIA

Positions	
1999- 2010	Government Staff of National Institute of Aeronautics and Space, LAPAN
2010	Ph.D., Ludwig Maximillian University, Munich, Germany
2011 - 2014	Head of Division on Remote Sensing Application for environment and disaster mitigation
2014 -	Director of Remote Sensing Application Center
2013 -	Coordinator of Indonesian Regional Support Office of UN SPIDER
2014 -	Project Manager of International Disaster Charter

### Society Activity

- 2010 2019 Chief Editor on International Journal of Remote Sensing and Earth Science
- 2010 2019 Board Member of Jurnal Iklim, Jurnal Segara, and Jurnal Penginderaan Jauh
- 2000 2019 Member of Indonesian Remote Sensing Society
- 2000 2019 Member of Indonesian Agricultural

Honors and Recognitions etc

2017, The National Disaster Agency awarded Tangguh Award as a team

2013, Award from LAPAN as a best team on disaster emergency response

### Shunichi KOSHIMURA, Ph.D.

Professor, Tohoku University



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Positions	
2000	Ph.D., Graduate School of Engineering, Tohoku University
2000 - 2002	Postdoctoral Research Fellow of JSPS at ERI, Univ. of Tokyo and PMEL, NOAA (USA)
2002 – 2005	Research Scientist, Disaster Reduction and Human Renovation Inst. (DRI), Kobe
2005 - 2012	Associate Professor, Graduate School of Engineering, Tohoku University
2009 -	Visiting Professor, Graduate School of Maritime Sciences, Kobe University
2012 -	Professor, International Research Institute of Disaster Science, Tohoku University
2018 -	Visiting Researcher, RIKEN Center for Advanced Intelligence Project (AIP)
2018 -	Founder and CTO, RTi-cast, Inc.

#### Society Activity

ΙΛΟΛΝ

- 2009 2019 Editorial Committee Member, Coastal Engineering Committee, Japan Society of Civil Engineers
- 2013 2018 Associate Editor-in-Chief, Coastal Engineering Journal
- 2011 2019 Board Member, Institute of Social Safety Science
- 2011 2019 The International Union of Geodesy and Geophysics (IUGG) Tsunami Commission, Member

#### Honors and Recognitions etc

2019, Japan's Ministry of Internal Affairs and Communications Award, Japan Open Innovation Prize

2018, Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technolog

2017, Coastal Engineering Journal Citation Award, JSCE

2016, Best Paper Award of Japan Society for Simulation Technology

Dr. Shunichi Koshimura received Ph.D. degree from the Graduate School of Engineering, Tohoku University in 2000. After graduating Tohoku University, he started his career as a JSPS research fellow in Earthquake Research Institute, the University of Tokyo, and a researcher in Pacific Marine Environmental Laboratory (PMEL), NOAA, USA. In 2005, he joined Graduate School of Engineering, Tohoku University as an associate professor, then in 2012, International Research Institute of Disaster Science, Tohoku University, as a professor.

Dr, Koshimura carries out his research specifically on tsunami disaster. His main focus is on estimating i mpacts of tsunami inundation by integrating numerical modeling, earth observation and geo-informatics. He is also a co-Founder of RTi-cast, a technology firm that offers real-time tsunami inundation damage f orecast services to government organizations and commercial clients.

### Purna Sulastya PUTRA



Researcher, Research Center for Geotechnology LIPI

INDONESIA

Positions	
2006 - now	Researcher Fellow, LIPI
2017 - now	Head of Sedimentology Lab, Research Center for Geotechnology, LIPI
Society Activ	vity
2006 -	Indonesian Association of Geologist : member
2010 - 2014	Japan Geoscience Union : member
2010 - 2014	AGU : member
Activities	
2014 - now	Paleotsunami survey along the south coast of Java, Indonesia
2006	Post-tsunami field survey, the 2006 Pangandaran tsunami. Indonesia
2008 - 2009	Paleotsunami survey in Aceh and West Sumatera, Indoensia
2010	Post-tsunami field survey, the 2010 Mentawai tsunami, Indonesia
2011 - 2013	Post-tsunami field survey, the 2011 Tohoki-Oki tsunami, Japan
2017 - 2018	Paleotsunami survey, Bali and Nusa Tenggara, Indonesia
2018 - 2019	Post-tsunami field survey, the 28 September Palu tsunami, Indonesia

2018 - 2019 Post-tsunami field survey, the 22 December Anak Krakatau tsunami, Indonesia

#### Selected Publication

- <u>Putra, PS</u>., Aswan., Maryunani, KA., Yulianto, E., Kongko, W., 2019. Field survey of the 28 September 2019 Sulawesi tsunami deposits. Pure and Applied Geophysics. https/:doi.org/10.1007s00024-019-02181-9
- Omira, R., Dogan, GG., Hidayat, R., Husrin, S., Prasetya, G., Annunziato, A., Proietti, C., Probst, P., Paparo, MA., Wronna, M., Zaytsev, A., Pronin, P., Giniyatullin, A., <u>Putra, PS</u>., Hartanto, D., Ginanjar, G., Kongko, W., Pelinovsky, E., Yalciner, A.C., 2019. The September 28th, 2018, Tsunami in Palu-Sulawesi, Indonesia: a post-event field survey. Pure and Applied Geophysics. https://doi.org/10.1007/s00024-019-02145-z
- <u>Putra, PS</u>. 2018. Tsunami Sediments and Their Grain Size Characteristics. IOP Conference Series: Earth and Environmental Science 165.
- <u>Putra</u>, PS., Nishimura, Y., Nakamura, Y., Yulianto, E., 2013. Sources and transportation modes of the 2011 Tohoku-Oki tsunami deposits on the central east Japan coast. Sedimentary Geology
- <u>Putra</u>, PS., Nishimura, Y., Yulianto, E., 2013. Sedimentary features of tsunami deposits in carbonate-dominated beach environments: a case study from the 25 October 2010 Mentawai Tsunami. Pure and Applied Geophysics

### Yuichi NISHIMURA, Ph.D.





JAPAN

POSITIONS	
1988-	Doctor Degree Course, Department of Geophysics, Graduate School of Science, Hokkaido University
1988 - 1998	Research Associate, Usu Volcano Observatory, Hokkaido University
1998 - 2007	Research Associate, Institute of Seismology and Volcanology, Hokkaido University
2007 - 2015	Assistant Professor, Institute of Seismology and Volcanology, Hokkaido University
2016 -	Associate Professor, Institute of Seismology and Volcanology, Hokkaido University

### Society Activity

2002 -	IUGG Tsunami Commission: Member
2002 - 2012	IUGG Tsunami Commission: IAVCEI Representative
2007 - 2008	Seismological Society of Japan: Editor
2012 - 2013	Committee for Tsunami Disaster Prevention and Awareness of Sapporo City: Chair
2013 - 2014	Seismological Society of Japan: Editor
2013 -	Subcommittee for Tsunami Evaluations, The Headquarters for Earthquake Research Promotion: Member

I am investigating the recurrence features of huge subduction earthquakes and gigantic tsunamis from the geological traces such as tsunami deposits and paleo-liquefactions. Along the Kuril trench off the Pacific coast of Hokkaido, the probability of an earthquake accompanied by a huge tsunami comparable to the 2004 Indian Ocean tsunami and the 2011 Tohoku tsunami is highly considered based on the tsunami geology. The figure shows a trench wall in which we can see 10 tsunami layers in the last 5000 years. The peal of this section is exhibited at the Hokkaido University Museum. Research on tsunami and liquefaction deposits is still a young field. So, it is necessary to advance method to find and identify the evidence and accumulate case studies. In Hokkaido, there are many natural coastal wetlands that are suitable for the geological survey. I conducted the survey in the other countries such as Indonesia, Papua New Guinea, Solomon Islands, Russia etc. to study the similar deposits in different environments.



#### Group 5 / Presenter

#### Dr. David P. Sahara (david.sahara@gf.itb.ac.id)

#### a. Professional Preparation

- Institute of Technology Bandung (ITB) Geophysics B.S., 2009
- Institute of Technology Bandung (ITB) Seismology M.S., 2011
- Karlsruhe Institute of Technology (KIT) Geomechanics & Seismology Ph.D., 2016
- Postdoctoral (KIT) Geomechanics & Seismology 2016

### **b.** Appointments

- 2017- Assistant Professor, Global Geophysics Research Group, Institut Teknologi Bandung
- 2017- Editor in chief, Jurnal Geofisika (JGF), Indonesian Association of Geophysicists

### c. Publications

(i) Up to five publications most closely related to proposal project

- Kusumawati, D.; Sahara, D.P.; Nugraha, A.D.; Puspito, N.T.; (accepted): Sensitivity of static Coulomb stress change in relation to source fault geometry and regional stress magnitude: Case study of the 2016 Aceh earthquake (Mw 6.5), Indonesia. has been accepted in Journal of Seismology, DOI:10.1007/s10950-019-09878-3
- Sahara, D.P.; Seithel, R.; Kohl, T.; (review process): In-situ stress indicators for a fractured crystalline granite at great depth. Submitted to Geothermics
- Sahara, D.P.; Kusumawati, D.; Puspito, N.T.; Nugraha, A.D.; Triyoso, W.; Zulfakriza, Z.; (review process): Inferring the Aceh 2016 Mw 6.5 earthquakes interaction using stress triggering concept. Submitted to Pure and Applied Geophysics
- Sahara, D. P.; Widiyantoro, S.; Irsyam, M.; (2018): Stress heterogeneity and its impact on seismicity pattern along the equatorial bifurcation zone of the Great Sumatran Fault, Indonesia. In Journal of Asian Earth Sciences, vol 164, pp 1-8. DOI: 10.1016/j.jseaes.2018.06.002
- Sahara, D. P.; Schoenball, M.; Gerolymatou, E.; Kohl, T.; (2017): Analysis of borehole breakout development using continuum damage mechanics. In International Journal of Rock Mechanics and Mining Sciences, vol 97, pp. 134-143. DOI: 10.1016/j.ijrmms.2017.04.005

### d. Synergistic Activities

2017 - ...... Member of Indonesian Geophysicist Association (HAGI), Indonesia 2013 - ...... Member of European Geosciences Union (EGU)

### e. Collaborators & Other Affiliations

### (i)Collaborators

- T. Kohl, F. Wenzel, B.I.R Müller, E. Gerolymatou, P. Blumm, J. Bremer, S. Held, F. Nitschke (Karlsruhe Institute of Technology, Germany)
- M.Schoenball (USGS-Stanford University, USA)
- C. Meller (now at IAV GmbH Ingenieurgesellschaft Auto und Verkehr, Germany)
- M.Peters (now at Hagelauer+Scheuerer GeoConsult GmbH, Germany)

### (ii) Graduate and Postdoctoral Advisors

- Undergraduate advisor: Prof. Sri Widiyantoro and Dr. M. Rachmat Sule (Institut Teknologi Bandung, Indonesia).
- Master advisor: Prof. Sri Widiyantoro and Dr. M. Rachmat Sule (Institut Teknologi Bandung, Indonesia).
- Ph.D Advisor: Prof. Thomas Kohl (AGW, Karlsruhe Institute of Technology, Germany) and Prof. Friedemmann Wenzel (GPI, Karlsruhe Institute of Technology, Germany).
- Postdoctoral Advisor: Prof. Thomas Kohl (AGW, Karlsruhe Institute of Technology, Germany), Prof. Friedemmann Wenzel (GPI, Karlsruhe Institute of Technology, Germany), and Dr. Emmanuel Gaucher (AGW, Karlsruhe Institute of Technology, Germany).

### (iii) Thesis Advisor and Postgraduate Sponsor

- Number of supervised undergraduates : 11
- Number of supervised graduates : 7



### Shingo WATADA, Ph.D.

Associate Professor, Earthquake Research Institute, University of Tokyo

JAI	PAN	
Positions		
1995-	Ph.D, Department of Earth and Planetary Science, California Institute of Technology	
1995 - 1997	Researcher, National Research Institute for Earth Science and Disaster Prevention	
1997 - 2018	Assistant Professor, Earthquake Research Institute, University of Tokyo	
2018 -	Associate Professor, Earthquake Research Institute, University of Tokyo	

Society Activity

2005 -	Member of Japan Geoscience Union
1995 -	Member of American Geophysical Union
1998 -	Member of the Seismological Society of Japan

#### Publications

Watada, S., T. Kunugi, K. Hirata, H. Sugioka, K. Nishida, S. Sekiguchi, J. Oikawa, Y. Tsuji, H. Kanamori, Atmospheri c pressure change associated with the 2003 Tokachi-Oki earthquake, Geophys. Res. Lett., 33, L24306, doi:10.1029/2006 GL027967, , 2006.

Kawakatsu, H., S. Watada, Seismic evidence for deep water transportation in the mantle, Science, 316, 5380, 1468--147 1, 2007.

Rosat, S., S. Watada and T. Sato, Geographical variations of the 0S0 normal mode amplitude: predictions and observati ons after the Sumatra-Andaman earthquake, Earth Planets Space, 59, 4, 307--311, 2007.

Watada S., Radiation of acoustic and gravity waves and propagation of boundary waves in the stratified fluid from a ti me-varying bottom boundary, J. Fluid Mech., 627, 361--377, 2009.

Mikumo, T., S. Watada, Acoustic gravity waves from earthquakes, in Infrasound Monitoring for Atmospheric Studies, e ds A. Le Pichon, E. Blanc, A. Hauchecorne, Springer, 259--275, 2010.

Watada, S., H. Kanamori, Acoustic resonant oscillations between the atmosphere and the solid earth during the 1991 M t. Pinatubo eruption, J. Geophys. Res., 115, B12319, doi:10.1029/2010JB007747, , 2010.

Arai, N., M. Iwakuni, S. Watada, Y. Imanishi, T. Murayama and M. Nogami, Atmospheric boundary waves excited by the tsunami generation related to the 2011 great Tohoku-Oki earthquake, Geophys. Res. Lett., 38, L00G18, doi:10.1029/2011GL049146, , 2011.

Watada, S., Tsunami speed variations in density-stratified compressible global oceans, Geophys. Res. Lett., 40, doi:10.10 02/grl.50785, 4001--4006, 2013.

Watada, S., S. Kusumoto, and K. Satake, Traveltime delay and initial phase reversal of distant tsunamis coupled with t he self-gravitating elastic Earth, J. Geophys. Res., 119, doi:10.1002/2013JB010841, 4287--4310, 2014.

Yoshimoto, M., S. Watada, Y. Fujii and K. Satake, Source estimate and tsunami forecast from far-field deep-ocean tsun ami waveforms – the 27 February 2010 Mw 8.8 Maule earthquake, Geophys. Res. Lett., 43, doi:10.1002/2015GL067181, 659--665, 2016.

Ho T.-C., K. Satake, and S. Watada, Improved Phase Corrections for Transoceanic Tsunami Data in Spatial and Tempo ral Source Estimation: Application to the 2011 Tohoku Earthquake, J. Geophys. Res., 122, 10, doi:10.1002/2017JB01507 0, 10155--10175, 2017.

Ho,T.-C., K. Satake, S. Watada and Y. Fujii, Source Estimate for the 1960 Chile Earthquake from Joint Inversion of G eodetic and Transoceanic Tsunami Data, J. Geophys. Res., 124, 3, doi:10.1029/2018JB016996, 2812--2828, 2019.

### Group 6/Presenter /Principal Investigator

# Abdul Muhari, PhD

Disaster Mitigation Expert Professional Engineer

### Contact

Jl. Mandar Utama DD II/34 Sektor 3A, Bintaro Jaya Tangerang Selatan, 15412 Banten, INDONESIA

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abdul.muhari@gmail.com abdul\_muhari@yahoo.com





### **Education**

**PhD | Tsunami Engineering** Tohoku University, JAPAN | 2012

Master of Engineering (Civil Engineering) Bandung Institute of Technology, INDONESIA | 2006

### **Bachelor of Science (Oceanography)**

Bandung Institute of Technology, INDONESIA | 2003

### Experience

### 📥 2019 – present

**Deputy Director for Disaster Early Warning**, National Agency for Disaster Management Developing national policies, regulations and implementation activities on disaster early warning.

📥 2016 - 2019

**Head** | Coastal Disaster Mitigation Division, Ministry of Marine Affairs and Fisheries, Indonesia Developing national policies, regulations and implementation activities on coastal and small islands disaster risk reduction.

### 🖊 2012 - 2015

**Research Fellow** | Willis Research Network, **Willis Re**, Tokyo – JAPAN Assessing tsunami risk on coastal communities, building, port and vessels in all around Japan after the 2011 Great japan Earthquake for insurance industries.

### 📥 2008 - 2009

<u>Fellow Scientist | German Aerospace Center-DLR, Munich - Germany</u> Develop space-based application on tsunami hazard and risk analysis for German-Indonesia Tsunami Warning System (GI-TEWS).

### Responsibilities

### 📥 2018 – present

**Expert** National Panel for Environmental Impacts Assessment Examine documents of Environmental Impacts Assessment of private and public sector in Indonesia.

#### 2016 – present

#### **Expert Coordinator** | Global Partnership on Space Technology Application for Disaster Risk Reduction GP STAR (**UN-SPIDER**): Tsunami Working Group

Initiate global initiative on the use of space-based data and technology to achieve the Sendai Framework for disaster risk reduction goals (<u>http://www.un-spider.org/network/gp-star-brochure</u>).

#### 2015 – present

<u>Chairman | Sentinel Asia Tsunami Working Group (JAXA-Japan)</u> Initiate regional initiative on the use of space-based data and technology on tsunami disaster risk reduction in Asia-Pacific countries (<u>https://sentinel.tksc.jaxa.jp/sentinel2/topControl.jsp</u>).

### **Selected** Talks

- The 24<sup>th</sup> UN-Framework Convention on Climate Change (UNFCCC)/COP 24: Global Commitment in Reducing Climate Impacts in Marine Environment | Session Chair, Bonn-Germany, 13 December 2018.
- Ecoshape Conference, Keynote on "Scaling up Building with Nature": Mainstreaming Building with Nature for Coastal Protection in Indonesia, Utrecht, The Netherlands, 27 June 2018
- The 23<sup>rd</sup> UN-Framework Convention on Climate Change (UNFCCC)/COP 23: Ocean Governance for Sustainable Food Security in Changing Climate | Session Chair, Bonn-Germany, 15 November 2017.
- United Nations International Expert Meeting on the Global Partnership on Space Technology <u>Applications for Disaster Risk Reduction</u>: "Space Technology Application in Coastal and Small Islands Disaster Risk Reduction," Bonn, Germany, 1-2 December 2016
- **The 3<sup>rd</sup> UN World Conference on Disaster Risk Reduction (WCDRR)**: Tsunami hazards and risks in marine and fishery sector: Lessons and challenges from two events, the 2004 Indian Ocean Tsunami and the 2011 Great East Japan Earthquake. Sendai, Japan, **15-20 March 2015**.

### **Google Scholar**

https://scholar.google.com/citations?user=AANBtucAAAAJ&hl=en h index: 17 i10 index: 23

### **Scopus**

http://www.scopus.com/authid/detail.url?authorId=36656169800 h index: 13