

Research Introduction of Dr. Yoshiyuki Kaneda (Brief History)



Yoshiyuki Kaneda

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Education

Ph.D. (Geophysics), University of Tokyo, Japan, 1994

M.Sc. (Geophysics), University of Tokyo, Japan, 1979

Honors

The 12th Ocean Nation Promotion Award by Prime Minister of Japan, 2019

Hamaguchi Award (Minister of Land, Infrastructure, Transport and Tourism Award), Japan, 2018
(Awardee: DONET Development Team)

Disaster Prevention Achievement Award by Prime Minister of Japan, 2018

Science and Technology Award by Minister of Education, Culture, Sports, Science and Technology,
Japan, 2018

The Seismological Society of Japan Awards, 2017

Employment

Since April 2016

Designated Professor, Executive Adviser of President in Kagawa University,

Vice Director of Institute of Education, Research and Regional Corporation for Crisis Management
Shikoku (IECMS), Kagawa University

April 2014 – March 2016

Designated Professor, Disaster Mitigation Research Center, Nagoya University

April 1997 – March 2014

Project Leader, Director, Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

Research Field

Seismology, Nankai Trough Giant Earthquake Research, Underground Structure Research, Simulation Research, Real-Time Monitoring Research, Disaster Mitigation Science Research

Research Topics

So far, I have conducted research on the underground structure of megathrust earthquake seismogenic zones by reflection/refraction exploration, and carried out earthquake and tsunami simulation research using super computers. In addition I have been constructing seafloor observation networks for real-time monitoring of the megathrust earthquake seismogenic zone, and conducting research on its utilization.

Meanwhile, I led various research projects and promoted disaster mitigation research for earthquakes and tsunamis with many researchers in Japan and overseas.

In recent years, I have been engaged in damage reduction and human resource cultivation based on disaster mitigation science.

Books (including co-authors)

- Earthquakes Impact, Community Vulnerability and Resilience (Intech Open), 2019
- Resilience Science for a Resilient Society in Seismogenic and Tsunamigenic Countries, Journal Of Disaster Research (Fuji Technology Press Ltd.), 2017
- Post-Tsunami Hazard – Reconstruction and Restoration (Springer) , 2015
- Seafloor Observatories – A new vision of the Earth from the Abyss (Springer) , 2015
- Earthquakes – Triggers, Environmental Impact and Potential Hazards (NOVA), 2013

Recent Publications (Peer-reviewed)

Y. Yamamoto, T. Takahashi, Y. Ishihara, K. Obana, S. Miura, S Kodaira and Y. Kaneda, Plate geometry model and seismicity in the northern Ryukyu Subduction zone, Japan, deduced from amphibious seismic observations, Earth and Planetary Science Letters (ELSEVIER), Vol.536, 15 April, 2020, 116143

Y. Yamamoto, A. Pinar, D. Kalafat, N. Takahashi, H. Ozener and Y. Kaneda, Comment on “An Alternative View of the Microseismicity along the Western Main Marmara Fault,” by E. Batsi et al., February 2020 issue of Bulletin of the Seismological Society of America (BSSA)

K. Sementsov, M Nosov, S. Kolesov, V. Karpov, H. Matsumoto and Y. Kaneda, Free Gravity Waves in the Ocean Excited by Seismic Surface Waves: Observations and Numerical Simulations, Journal of Geophysical Research: Oceans, Article ID: JGRC23743
Article DOI: 10.1029/2019JC015115
Internal Article ID: 16623796
20191117

M. Nakano, M. Hyodo, A. Nakanishi, M. Yamashita, T. Hori, S. Kamiya, K. Suzuki, T. Tonegawa, S. Kodaira, N. Takahashi and Y. Kaneda, The 2016 Mw 5.9 earthquake off the southeastern coast of Mie Prefecture as an indicator of preparatory processes of the next Nankai Trough megathrust earthquake, *Progress in Earth and Planetary Science (PEPS)* 2018

A. Nakanishi, N. Takahashi, Y. Yamamoto, T. Takahashi, S. Citak, T. Nakamura, K. Obana, S. Kodaira and Y. Kaneda, Three-dimensional plate geometry and P-wave velocity models of the subduction zone in SW Japan: Implications for seismogenesis, *Geology and Tectonics of subduction zones: A Tribute to Gaku Kimura*, eds. T. Byrne et al., *Geol. Soc. Am.*, 534, [https://doi.org/10.1130/2018.2534\(04\)](https://doi.org/10.1130/2018.2534(04)), 2018.

A. Okada, M. Toriumi, and Y. Kaneda, Spatial and temporal pattern of global seismicity extracted by dimensionality reduction, *International Journal of Geology /North Atlantic University Union*, P 26-34, ISSN:1998-4499 Volume 11,2017

R. Arai, S. Kodaira, Y. Kaiho, T. Takahashi, S. Miura and Y. Kaneda, Crustal structure of the southern Okinawa Trough: Symmetrical rifting, submarine volcano and potential mantle accretion in the continental back-arc basin, *Journal of Geophysical Research: Solid Earth*, 2017

R. Arai, T. Takahashi, S. Kodaira, Y. Kaiho, A. Nakanishi, G. Fujie, Y. Nakamura, Y. Yamamoto, Y. Ishihara, S. Miura and Y. Kaneda, Structure of the tsunamigenic plate boundary and low-frequency earthquakes in the southern Ryukyu Trench, *Nature Communications*, Volume 7, Article number: 12255(2016), 2016

H. Matsumoto, M. A. Nosov, S. V. Kolesov, and Y. Kaneda, Analysis of Pressure and Acceleration signals from the 2011 Tohoku Earthquake Observed by the Donet Seafloor Network, *Journal of Disaster Research*, 2016

Y. Yamamoto, N. Takahashi, S. Citak, D. Kalafat, A. Pinar, C. Gurbuz and Y. Kaneda, Offshore seismicity in the western Marmara Sea, Turkey, revealed by ocean bottom observation, *Earth Planet. Space*, 67, 147, doi: 10.1186/s40623-015-0325-9, 2015

Y. Kaneda, N. Takahashi, T. Baba, K. Kawaguchi, E. Araki, H. Matsumoto, T. Nakamura, S. Kamiya, K. Ariyoshi, T. Hori, M. Hyodo, M. Nakano, J-K Choi, S. Nishida, T. Yokobiki, Advanced real time monitoring system and simulation researches for earthquakes and tsunamis in Japan. *Post-Tsunami Hazard, Advances in Natural and Technological Hazards Research*, 44, p. 179-189, 2014

T. Baba, N. Takahashi and Y. Kaneda, Near-field tsunami amplification factors in the Kii Peninsula, Japan for Dense Ocean floor Network for Earthquakes and Tsunamis (DONET), *Mar. Geophys. Res.*, doi: 10.1007/s11001-013-9189-1, 2013.

and others.