

Tomoya Takano

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PERSONAL DATA

PLACE OF BIRTH: Japan
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RESEARCH INTERESTS

My research focuses on understanding dynamic processes of the Earth's structure based on analysis of seismic data. I am particularly interested in how the crust responds to external perturbations (e.g. earthquakes, volcano activities, tides, rainfall) using ambient seismic noise.

POSITIONS HELD

5/2019 – 3/2020	Visiting Researcher at ISTERre, Universite Grenoble Alpes
4/2019 – 3/2022	Postdoctoral Fellowship of Japan Society for the Promotion of Science, Earthquake Research Institute, University of Tokyo
4/2018 – 10/2018	Visiting student at ISTERre in Grenoble university (Supervisor: Prof. Florent Bren-guier)
3/2017 – 3/2017	Internship at Meteorological Research Institute
4/2017 – 3/2019	Research Fellow of the Japan Society for the Promotion of Science (DC2)
10/2015 – 3/2016	Technical Staff at Department of Geophysics, Tohoku University
4/2014 – 9/2015	Marin electronics engineer at Japan Radio Co., Ltd.

EDUCATIONAL BACKGROUND

4/2016 – 3/2019	Ph.D. Geophysics, Tohoku University
4/2012 – 3/2014	M.S. Geophysics, Tohoku University
4/2008 – 3/2012	B.S. Geophysics, Tohoku University

THESIS TITLES

- Ph.D. | Temporal changes in seismic velocity of shallow structures at active volcanoes as inferred from analyses of ambient noise correlations (Supervisor: Takeshi Nishimura)
- M.S. | Detection of seismic velocity changes caused by the Earth tides by seismic interferometry method
- B.S. | Estimation of seismic velocity changes by using auto correlation functions of ambient noise recorded at Hi-net stations

PRIOR EMPLOYMENT

- 4/2014 – 9/2015 | Japan Radio Co., Ltd. (as a marine electronics engineer)
- 10/2015 – 3/2016 | Technical Staff at Tohoku University

AWARDS

- Tohoku University Presidential Award, Tohoku University, Japan, 2019
- Outstanding student paper award, 2018, Japan Volcanological Society, 2018
- Outstanding presentation award, 2017, Japan Seismological Society, 2017
- Journal Highlights by *J. Geophys. Res.*, about the paper, Takano *et al.*, 2017, *J. Geophys. Res.*, 2017

GRANTS

- 4/2019 – 3/2022 | **Tomoya Takano (PI)**, Development of different size of array: Toward estimating stress sensitivity at lower crust, *Japan Society for the Promotion of Science (JSPS)*, Post-doctoral Fellow, (15,960,000 JPY \approx 144,000 USD)
- 4/2017 – 3/2019 | **Tomoya Takano (PI)**, Characteristics of stress sensitivity of seismic velocity changes by using seismic interferometry, *Japan Society for the Promotion of Science (JSPS)*, Doctoral Course Students, 17J02025, (6,400,000 JPY \approx 58,000 USD)

PUBLICATIONS

Journal Articles

1. Brenguier, F., R. Courbis, A. Mordret, X. Campman, B. Boué, M. Chmiel, **T. Takano**, T. Lecocq, W. Van der Veen, S. Postif, and D. Hollis, 2019, Noise-based Ballistic Body-wave Passive Seismic Monitoring, *Geophysical Journal International*, in review (moderate)
2. **Takano, T.**, T. Nishimura, H. Nakahra, H. Ueda, E. Fujita, 2019, Sensitivity of seismic velocity changes to the tidal strain at different lapse-times: Data analyses of a small seismic array at Izu-Oshima volcano, *Journal of Geophysical Research: Solid Earth*, accepted
3. **Takano, T.**, T. Nishimura, H. Nakahara, 2017, Seismic velocity changes concentrated at the shallow structure as inferred from correlation analyses of ambient noise during volcano deformation at Izu-Oshima, Japan, *Journal of Geophysical Research: Solid Earth*, 122 (8), 6721-6736, doi:10.1002/2017JB014340

4. **Takano, T.**, T. Nishimura, H. Nakahara, Y. Ohta, and S. Tanaka, 2014, Seismic velocity changes caused by the earth tide: Ambient noise correlation analyses of small-array data, *Geophysical Research Letters*, 41 (17), 6131-6136, doi:10.1002/2014GL060690

Proceedings

1. **Takano, T.**, T. Nishimura, H. Nakahara, 2018, Seismic velocity changes in response to different direction of tidal strain, *EGU General Assembly*, Vienna, Austria, April 2018.
2. **Takano, T.**, T. Nishimura, H. Nakahara, 2017, Estimation of strain sensitivity of seismic velocity changes using the Earth tide: Analyses of seismic small array data at Izu-Oshima volcano, Japan, *AGU Fall meeting*, New Orleans, Louisiana, USA, December 2017.
3. **Takano, T.**, T. Nishimura, H. Nakahara, H. Ueda, E. Fujita, 2017, Estimation of strain sensitivity of seismic velocity changes using the Earth tide: Noise correlation analyses of small seismic array data at Izu-Oshima volcano, *Seismological Society of Japan Fall meeting*, So1-o8, Kagoshima, Japan, October, 2017 (in Japanese)
4. **Takano, T.**, T. Nishimura, H. Nakahara, H. Ueda, E. Fujita, 2017, Strain sensitivity of seismic velocity changes at the shallow part of Izu-Oshima volcano: Ambient noise correlation analyses of small seismic array data, *Volcanological Society of Japan Fall Meeting*, SSS11-P12, Kumamoto, Japan, September, 2017 (in Japanese)
5. **Takano, T.**, T. Nishimura, H. Nakahara, H. Ueda, E. Fujita, 2017, Estimation of strain sensitivity of seismic velocity changes by using the tidal strain at Izu-Oshima volcano, *Scattered wave workshop*, S17-21, Tokyo, Japan, September, 2017 (in Japanese)
6. **Takano, T.**, T. Nishimura, H. Nakahara, 2017, Stress sensitivity of seismic velocity changes in depth as inferred from noise correlation analyses at Izu-Oshima volcano, Japan, *IASPEI*, Kobe, Japan, July 2017.
7. **Takano, T.**, T. Nishimura, H. Nakahara, 2017, Seismic velocity changes at the shallow structure during volcanic deformation at Izu-Oshima, Japan, *Ambient Noise Imaging and Monitoring 2017*, Cargese, France, June, 2017
8. **Takano, T.**, T. Nishimura, H. Nakahara, 2017, Seismic velocity changes localized at the shallow structure: Noise correlation analyses during volcanic deformation at Izu-Oshima, Japan, *GP-EES*, Sendai, Japan, June 2017.
9. **Takano, T.**, T. Nishimura, H. Nakahara, 2017, Estimation of seismic velocity changes in response to the earth tide: Noise correlation analysis at 13 active volcanoes in Japan, *Japan Geoscience Union Meeting*, SSS11-P12, Chiba, Japan, May, 2017 (in Japanese)
10. **Takano, T.**, T. Nishimura, H. Nakahara, Y. Ohta, and S. Tanaka, 2013, Detecting temporal changes of seismic velocity in response to tidal strain: analysis of a small array data at Iwate volcano, *AGU Fall meeting*, San Francisco, California, USA, December 2013.
11. **Takano, T.**, T. Nishimura, H. Nakahara, 2016, Estimation of stress sensitivity of seismic velocity changes at Izu-Oshima volcano: Analyses of JMA seismic data with seismic interferometry, *Scattered wave workshop*, Tokyo, Japan, September, 2016 (in Japanese)
12. **Takano, T.**, T. Nishimura, H. Nakahara, 2016, Characteristics of seismic velocity changes on volcanoes using noise correlation method: Analyses of JMA seismic data, *Japan Geoscience Union Meeting*, SVC47-23, Chiba, Japan, May, 2016 (in Japanese)

13. **Takano, T.**, T. Nishimura, H. Nakahara, Y. Ohta, S. Tanaka, 2013, Detecting temporal changes of seismic velocity in response to tidal strain : analysis of a small array data at Iwate volcano, *AGU Fall meeting*, San Francisco, California, USA, December 2013.
14. **Takano, T.**, T. Nishimura, H. Nakahara, Y. Ohta, S. Tanaka, 2013, Estimation of strain sensitivity of seismic velocity changes using the Earth tide: Noise correlation analyses of small seismic array data at Izu-Oshima volcano, *Seismological Society of Japan Fall meeting*, So1-o8, Yokohama, Japan, October, 2013 (in Japanese)
15. **Takano, T.**, T. Nishimura, H. Nakahara, Y. Ohta, S. Tanaka, 2013, Detection of seismic velocity changes caused by the Earth tide with seismic interferometry: Analyses of small seismic array data at the foot of Mt. Iwate, *Scattered wave workshop*, Tokyo, Japan, September, 2013 (in Japanese)
16. **Takano, T.**, T. Nishimura, H. Nakahara, S. Tanaka, 2013, An attempt of detecting seismic velocity changes caused by the Earth tide with auto correlation functions of ambient noise, *Japan Geoscience Union Meeting*, SVC47-23, Chiba, Japan, May, 2013 (in Japanese)

EDITORIAL ACTIVITIES

Reviewed for

Geophysical Research Letters (1)

TEACHING

2016 Fall, Teaching assistant, Exercises in Mechanics, Tohoku University

2012 Spring, Teaching assistant, Experiments in Geophysics, Tohoku University