

Curriculum Vitae of Aitaro Kato

1. **Name:** Aitaro Kato

2. **Employer:** Earthquake Research Institute, The University of Tokyo

3. **City and state:** Tokyo, Japan

4. History of employment

Professor Earthquake, Research Institute, The University of Tokyo 05/2019–Present

Associate Professor, Earthquake Research Institute, The University of Tokyo 04/2016–04/2019

Associate Professor, Nagoya University 04/2014–03/2016

Associate Professor, Earthquake Research Institute, The University of Tokyo 08/2013–03/2014

Assistant Professor, Earthquake Research Institute, The University of Tokyo 07/2004–07/2013

Researcher, Japan Agency for Marine-Earth Science and Technology 04/2002–06/2004

5. Degrees

Ph.D. in Department of Earth and Planetary Science, The University of Tokyo 2002

M.S. in Department of Earth and Planetary Science, The University of Tokyo 1999

B.S. in School of Science, Osaka University 1997

6. Narrative of research experience

Earthquake nucleation, foreshocks, slow slip transients, and immediate aftershocks. Detection of regular and slow earthquakes. Seismicity analysis including seismic swarms. Dense seismic array observations. Distributed Acoustic Sensing. Earthquake triggering. Seismotectonics. Seismic tomography. Receiver function. Laboratory experiment of rock fracture, friction, and permeability measurement.

7. Short list of key publications

Kato, A. and Y. Ben-Zion (2021), The generation of large earthquakes, *Nature Reviews Earth & Environment*, 2, 26–39, <https://doi.org/10.1038/s43017-020-00108-w>.

Obara, K., and **A. Kato** (2016), Connecting slow earthquakes to huge earthquakes, *Science*, 353(6296), 253–257, doi:10.1126/science.aaf1512.

Kato, A., and S. Nakagawa (2014), Multiple slow-slip events during a foreshock sequence of the 2014 Iquique, Chile Mw 8.1 earthquake, *Geophys. Res. Lett.*, 41, doi:10.1002/2014GL061138.

Kato, A., K. Obara, T. Igarashi, H. Tsuruoka, S. Nakagawa and N. Hirata (2012), Propagation of Slow Slip Leading Up to the 2011Mw 9.0 Tohoku-Oki Earthquake, *Science*, 335, 705–708, doi:10.1126/science.1215141.

Kato, A., T. Iidaka, R. Ikuta, Y. Yoshida, K. Katsumata, T. Iwasaki, S. Sakai, C. Thurber, N. Tsumura, K. Yamaoka, T. Watanabe, T. Kunitomo, F. Yamazaki, M. Okubo, S. Suzuki, N. Hirata (2010), Variations of fluid pressure within the subducting oceanic crust and slow earthquakes, *Geophys. Res. Lett.*, 37, L14310, doi:10.1029/2010GL043723.

Kodaira, S., T. Iidaka, **A. Kato**, J. O. Park, T. Iwasaki and Y. Kaneda (2004), High Pore Fluid Pressure May Cause Silent Slip in the Nankai Trough, *Science*, 304(5675), 1295–1298.

8. Honors

- 2018 Earth Planets Space Excellent Paper Award
- 2016 Paper Award from The Volcanological Society of Japan
- 2013 Paper Award from The Seismological Society of Japan

- 2011 The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology (MEXT) The Young Scientists' Prize
- 2007 Award for Young Scientists by the Seismological Society of Japan

9. Professional society memberships

Membership: American Geophysical Union, Seismological Society of Japan, Volcanological Society of Japan, Japan Geoscience Union

Community Service:

Government

- Earthquake Research Committee, Headquarters for Earthquake Research Promotion (HERP), MEXT, Member, 04/2016– Present
- Planning Committee, Coordinating Committee of Earthquake and Volcanic Eruption Prediction Research, Member, 04/2018– Present
- Earthquake Volcano committee, MEXT, Member, 2019.4–2021.3.
- Working Group Committee of Study promotion of social return of results by collaboration with engineering and social science fields: HERP, MEXT, Chief, 06/2018–03/2020.
- Review committee of next observation research plan: Earthquake Volcano Committee, MEXT, Expert advisor, 10/2017–02/2019.
- MEXT, Academic investigator, 04/2014–03/2016.

Academic

Vice Editor-in-Chief of Earth, Planets and Space, Editor of Scientific Reports, Local Organizing Committee of the 2017 ASPEI and IAGA, Member of Meeting Planning Committee, Japan Seismological Society (JSS), Member of Disaster Prevention Academic Collaboration, Chief and Member of Disaster Investigation Committee, JSS, Chief and Member of Summer School Committee, JSS.

Invited Lectures and Talks (selected)

- Kato, A., The evolution of fault slip rate prior to earthquake: The role of slow and fast slip modes, International School of Physics "Enrico Fermi", Course 202 - Mechanics of Earthquake Faulting, Varenna, Italy, 2018, July 2–7, Invited lecturer.
- Kato, A., Episodic unlocking of fault leading up to earthquake, EARTHQUAKES: nucleation, triggering, rupture, and relationships to aseismic processes, Cargese, Corsica in France, 2017, Oct. 2–6, Invited lecturer.
- Kato, A., Slip towards the surface new insights from recent crustal earthquakes in Japan, workshop on Frontiers in Studies of Earthquakes and Faults, SUSTech, Shenzhen in China, 2017, Nov. 27–Dec. 1, Invited talk.
- Kato, A., Partial Unlocking of Faults by Mixed Aseismic and Seismic Slip Processes prior to Earthquake, AGU Fall Meeting, San Francisco in USA, 2016, Dec. 14, Invited talk.
- Kato, A., Overview of the 2011 Tohoku Earthquake & Slow Slip and Large Earthquakes, Advanced School on Megathrust Earthquakes and Tsunami, International Centre for Theoretical Physics, Trieste in Italy, 2015, Oct. 25, Invited lecturer.