# Ryo Okuwaki

PhD student

+81-29-853-4473 rokuwaki@geol.tsukuba.ac.jp rokuwaki@gmail.com https://rokuwaki.github.io

# Education

2016–Present Ph.D. candidate, Science, University of Tsukuba, Advisor: Yuji Yagi

2014–2016 M.Sc., Science, University of Tsukuba, Advisor: Yuji Yagi B.Sc., Science, University of Tsukuba, Advisor: Yuji Yagi

# **Employment**

2016–2019 Research Fellow of the Japan Society for the Promotion of Science (DC1)

## Grants

2016–2019	Grant-in-Aid for the Japan Society for the Promotion of Science for Research Fellows (DC1), "Irregular rupture evolution during the large/great earthquakes: resolved by high-frequency radiation sources and co-seismic slip distribution", 2016-04-22/2019-03-31 (16J00298)
	https://kaken.nii.ac.jp/en/grant/KAKENHI-PROJECT-16J00298/
2018	Young Researcher Travel Support for 10th ACES (APEC Cooperation for Earthquake Science) International Workshop, Awaji Island Japan, September 2018
2015	Travel Grant for the 3rd international summer school on Earthquake Science, Lake-Yamanaka Japan, Earthquake Research Institute of the University of
	Tokyo and Southern California Earthquake Center, September 2015
2014	Travel Grant for the 2014 VISES Summer School, Oxnard CA, Southern California Earthquake Center and Earthquake Research Institute of the University
	of Tokyo, September 2014
2014	Travel Grant for the 2014 Annual Meeting of Seismological Society of America, Anchorage Ak, Seismological Society of Japan, April 2014

#### **Awards**

2018	Outstanding Student Presentation Award, JpGU Meeting 2018, May 2018
2018	Best Student Award, Doctoral Program in Earth Evolution Sciences, University of Tsukuba, March 2018
2017	Outstanding Student Presentation Award, JpGU-AGU Joint Meeting 2017, May 2017
2015	Best Poster Presentation Award, Tsukuba Global Science Week 2015, September 2015
2014	Outstanding Student Presentation Awards, Seismological Society of Japan 2014 Fall Meeting, November 2014
2014	Outstanding Student Award (Provost's Prize), University of Tsukuba, March 2014

#### Service

Journal Referee Earth and Planetary Science Letters

(<u>publons</u>) Earth, Planets and Space

Journal of Asian Earth Sciences

Journal of Geophysical Research - Solid Earth

Pure and Applied Geophysics

Conference Primary convener of the session in the AGU Fall Meeting 2018

Co-conveners: Wenyuan Fan, Valére Lambert, Zacharie Duputel

S006: Earthquake Source Physics: Unified perspectives from Kinematic Source Imaging, Physics-based Modeling, Laboratory Experiments,

and Earthquake Geology

https://agu.confex.com/agu/fm18/meetingapp.cgi/Person/74822

# Visiting appointment

2016 University of California, Los Angeles (Prof. Lingsen Meng), September–October 2016

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## Invited talks

Ryo Okuwaki & Yuji Yagi, "Shallow intraslab normal faulting: Rupture process of the Mw 8.1 2017 Chiapas Mexico earthquake", Japan Geoscience Union Meeting 2018, Chiba Japan, May 2018

Ryo Okuwaki & Yuji Yagi, "High-frequency rupture related to the complex fault system and variable slip motions, insights from hybrid backprojection image of the Mw 7.9 2008 Wenchuan, China, earthquake", The 3rd international summer school on Earthquake Science, Lake-Yamanaka Japan, Earthquake

Research Institute of the University of Tokyo and Southern California Earthquake Center, September 2015

#### **Publications**

12 peer-reviewed articles published

Total citations: 303 (Google Scholar), 149 (ResearcherID)

h-index: 7 (Google Scholar), 6 (ResearcherID)

- 1. (Under review) Okuwaki, R., Kasahara, A., Yagi, Y., Hirano, S., & Fukahata, Y., Backprojection to image slip, Geophys. J. Int., Oxford University Press, doi: 10.31223/osf.io/dghkw.
- 2. Aránguiz, A., Urra, L., Okuwaki, R., & Yagi, Y., Development and application of a tsunami fragility curve of the 2015 tsunami in Coquimbo, Chile, Nat. Hazards Earth Syst. Sci., Copernicus Publications, 2018, doi: 10.5194/nhess-18-2143-2018.
- 3. Okuwaki, R., & Yagi, Y., Role of geometric barriers in irregular-rupture evolution during the 2008 Wenchuan earthquake, Geophys. J. Int., Oxford University Press, 2018, doi: 10.1093/gji/ggx502.
- 4. Okuwaki, R., & Yagi, Y., Rupture Process during the MW 8.1 2017 Chiapas Mexico Earthquake: Shallow Intraplate Normal Faulting by Slab Bending, Geophys. Res. Lett., AGU, 2017, doi:10.1002/2017GL075956.
- 5. Miyakawa, A., Sumita, T., Okubo, Y., Okuwaki, R., Otsubo, M., Uesawa, S., & Yagi, Y., Volcanic magma reservoir imaged as a low-density body beneath Aso volcano that terminated the 2016 Kumamoto earthquake rupture, Earth, Planets and Space, a SpringerOpen Journal, 2016, doi:10.1186/s40623-016-0582-2.
- 6. Yagi, Y., Okuwaki, R., Enescu, B., Kasahara, A., Miyakawa, A., & Otsubo, M., Rupture process of the 2016 Kumamoto earthquake in relation with the thermal structure around Aso volcano, Earth, Planets and Space, a SpringerOpen Journal, 2016, doi:10.1186/s40623-016-0492-3.
- 7. Okuwaki, R., Yagi, Y., Aránguiz, R., González, J., & González, G., Rupture process during the 2015 Illapel, Chile earthquake: Zigzag-along-dip rupture episodes, Pure Appl. Geophys., Springer International Publishing, 2016, doi:10.1007/s00024-016-1271-6.
- 8. Mai, M., Schorlemmer, D., Page, M., Ampuero, J-P., Asano, K., Causse, M., Custodio, S., Fan, W., Festa, G., Galis, M., Gallovic, F., Imperatori, W., Käser, M., Malytskyy, D., Okuwaki, R., Pollitz, F., Passone, L., Razafindrakoto, H., Sekiguchi, H., Song, S., Somala, S., Thingbaijam, K., Twardzik, C., van Driel, M., Vyas, J., Wang, R., Yagi, Y., & Zielke, O., The Earthquake-Source Inversion Validation (SIV) Project, Seismol. Res. Lett., SSA, 2016, doi:10.1785/0220150231.
- 9. Aranguiz, R., Gonzalez, G., Gonzalez, J., Catalan, P., Cienfuegos, R., Yagi, Y., Okuwaki, R., Urra, L., Contreras, K., Del Rio, I., & Rojas, C., The 16 September 2015 Chile tsunami from the post-tsunami survey and numerical modeling perspectives, Pure Appl. Geophys., Springer International Publishing, 2016, doi:10. 1007/s00024-015-1225-4.
- 10. Yagi, Y., & Okuwaki, R., Integrated seismic source model of the 2015 Gorkha, Nepal, earthquake, Geophys. Res. Lett., AGU, 2015, doi:10.1002/2015GL064995.
- 11. Yagi, Y., Okuwaki, R., Enescu, B., & Fukahata, Y., Unusual low-angle normal fault earthquakes after the 2011 Tohoku-oki megathrust earthquake, Earth, Planets and Space, a SpringerOpen Journal, 2015, doi:10.1186/s40623-015-0271-6.
- 12. Okuwaki, R., Yagi, Y., & Hirano, S., Relationship between High-frequency Radiation and Asperity Ruptures, Revealed by Hybrid Back-projection with a Non-planar Fault Model, Sci. Rep., Nature Publishing Group, 2014, doi:10.1038/srep07120.
- 13. Yagi, Y., Okuwaki, R., Enescu, B., Hirano, S., Yamagami, Y., Endo, S., & Komoro, T., Rupture process of the 2014 Iquique Chile earthquake in relation with the foreshock activity, Geophys. Res. Lett., AGU, 2014, doi:10.1002/2014GL060274.

#### Research interests

Earthquake Seismology Geophysics

#### Languages

Japanese (Mother tongue), English (Professional working proficiency) Fortran, Python, matplotlib, GMT, SAC, UNIX utilities

#### **Academic Societies**

American Geophysical Union (AGU)
Japan Geoscience Union (JpGU)
Seismological Society of America (SSA)
Seismological Society of Japan (SSJ)
Southern California Earthquake Center (SCEC)

# 奥脇 亮

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# 学歴

2016-現在 筑波大学大学院博士後期課程, 指導教員: 八木勇治

2014-2016 筑波大学大学院博士前期課程,修士(理学),指導教員:八木勇治

2010-2014 筑波大学地球学類, 学士 (理学), 指導教員: 八木勇治

## 職歴

2016-2019 日本学術振興会特別研究員 DC1

## 外部資金獲得歴

2016-2019 科学研究費 特別研究員奨励費「高周波励起源と断層すべりに基づく巨大地震の不規則な発展プロセスの解明」2016-04-22/2019-03-31 (16J00298)

https://kaken.nii.ac.jp/ja/grant/KAKENHI-PROJECT-16J00298/

https://kaken.nii.ac.jp/en/grant/KAKENHI-PROJECT-16J00298/

Young Researcher Travel Support for 10th ACES (APEC Cooperation for Earthquake Science) International Workshop, Awaji Island Japan, September 2018

Travel Grant for the 3rd international summer school on Earthquake Science, Lake-Yamanaka Japan, Earthquake Research Institute of the University of

Tokyo and Southern California Earthquake Center, September 2015

Travel Grant for the 2014 VISES Summer School, Oxnard CA, Southern California Earthquake Center and Earthquake Research Institute of the University

of Tokyo, September 2014

2014 日本地震学会 海外渡航旅費助成金, 2014 Annual Meeting of Seismological Society of America, Anchorage Ak, 2014年4月

#### 受賞歴

2015

2018 学生優秀発表賞, 日本地球惑星科学連合2018年大会, 2018年5月

2018 地球進化科学専攻長賞, 筑波大学, 2018年3月

2017 学生優秀発表賞, JpGU-AGU Joint Meeting 2017, 2017年5月

2015 Best Poster Presentation Award, Tsukuba Global Science Week 2015, 2015年9月

2014 学生優秀発表賞, 日本地震学会2014年度秋季大会, 2014年11月

2014 筑波大学生命環境学群 学群長賞, 2014年3月

## 査読歴・学会運営

查読歷 Earth and Planetary Science Letters

(publons) Earth, Planets and Space

Journal of Asian Earth Sciences

Journal of Geophysical Research - Solid Earth

Pure and Applied Geophysics

学会運営 Primary convener of the session in the AGU Fall Meeting 2018

Co-conveners: Wenyuan Fan, Valére Lambert, Zacharie Duputel

S006: Earthquake Source Physics: Unified perspectives from Kinematic Source Imaging, Physics-based Modeling, Laboratory Experiments,

and Earthquake Geology

https://agu.confex.com/agu/fm18/meetingapp.cgi/Person/74822

# 渡航歴(在外研究)

2016 University of California, Los Angeles (Prof. Lingsen Meng), September–October 2016

奥脇 亮

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## 招待講演

2018

2015

Ryo Okuwaki & Yuji Yagi, "High-frequency rupture related to the complex fault system and variable slip motions, insights from hybrid backprojection image of the Mw 7.9 2008 Wenchuan, China, earthquake", The 3rd international summer school on Earthquake Science, Lake-Yamanaka Japan, Earthquake Research Institute of the University of Tokyo and Southern California Earthquake Center, 2015年9月

Ryo Okuwaki & Yuji Yagi, "Shallow intraslab normal faulting: Rupture process of the Mw 8.1 2017 Chiapas Mexico earthquake", 日本地球惑星科学連合2018 年大会, 千葉, 2018年5月

## 論文

査読付き論文12報

引用数合計: 303 (Google Scholar), 149 (ResearcherID)

h-指標: 7 (Google Scholar), 6 (ResearcherID)

- 1. (Under review) Okuwaki, R., Kasahara, A., Yagi, Y., Hirano, S., & Fukahata, Y., Backprojection to image slip, Geophys. J. Int., Oxford University Press, doi: 10.31223/osf.io/dghkw.
- 2. Aránguiz, A., Urra, L., Okuwaki, R., & Yagi, Y., Development and application of a tsunami fragility curve of the 2015 tsunami in Coquimbo, Chile, Nat. Hazards Earth Syst. Sci., Copernicus Publications, 2018, doi: 10.5194/nhess-18-2143-2018.
- 3. Okuwaki, R., & Yagi, Y., Role of geometric barriers in irregular-rupture evolution during the 2008 Wenchuan earthquake, Geophys. J. Int., Oxford University Press, 2018, doi: 10.1093/gji/ggx502.
- 4. Okuwaki, R., & Yagi, Y., Rupture Process during the MW 8.1 2017 Chiapas Mexico Earthquake: Shallow Intraplate Normal Faulting by Slab Bending, Geophys. Res. Lett., AGU, 2017, doi:10.1002/2017GL075956.
- 5. Miyakawa, A., Sumita, T., Okubo, Y., Okuwaki, R., Otsubo, M., Uesawa, S., & Yagi, Y., Volcanic magma reservoir imaged as a low-density body beneath Aso volcano that terminated the 2016 Kumamoto earthquake rupture, Earth, Planets and Space, a SpringerOpen Journal, 2016, doi:10.1186/s40623-016-0582-2.
- 6. Yagi, Y., Okuwaki, R., Enescu, B., Kasahara, A., Miyakawa, A., & Otsubo, M., Rupture process of the 2016 Kumamoto earthquake in relation with the thermal structure around Aso volcano, Earth, Planets and Space, a SpringerOpen Journal, 2016, doi:10.1186/s40623-016-0492-3.
- 7. Okuwaki, R., Yagi, Y., Aránguiz, R., González, J., & González, G., Rupture process during the 2015 Illapel, Chile earthquake: Zigzag-along-dip rupture episodes, Pure Appl. Geophys., Springer International Publishing, 2016, doi:10.1007/s00024-016-1271-6.
- 8. Mai, M., Schorlemmer, D., Page, M., Ampuero, J-P., Asano, K., Causse, M., Custodio, S., Fan, W., Festa, G., Galis, M., Gallovic, F., Imperatori, W., Käser, M., Malytskyy, D., Okuwaki, R., Pollitz, F., Passone, L., Razafindrakoto, H., Sekiguchi, H., Song, S., Somala, S., Thingbaijam, K., Twardzik, C., van Driel, M., Vyas, J., Wang, R., Yagi, Y., & Zielke, O., The Earthquake-Source Inversion Validation (SIV) Project, Seismol. Res. Lett., SSA, 2016, doi:10.1785/0220150231.
- 9. Aranguiz, R., Gonzalez, G., Gonzalez, J., Catalan, P., Cienfuegos, R., Yagi, Y., Okuwaki, R., Urra, L., Contreras, K., Del Rio, I., & Rojas, C., The 16 September 2015 Chile tsunami from the post-tsunami survey and numerical modeling perspectives, Pure Appl. Geophys., Springer International Publishing, 2016, doi:10. 1007/s00024-015-1225-4.
- 10. Yagi, Y., & Okuwaki, R., Integrated seismic source model of the 2015 Gorkha, Nepal, earthquake, Geophys. Res. Lett., AGU, 2015, doi:10.1002/2015GL064995.
- 11. Yagi, Y., Okuwaki, R., Enescu, B., & Fukahata, Y., Unusual low-angle normal fault earthquakes after the 2011 Tohoku-oki megathrust earthquake, Earth, Planets and Space, a SpringerOpen Journal, 2015, doi:10.1186/s40623-015-0271-6.
- 12. Okuwaki, R., Yagi, Y., & Hirano, S., Relationship between High-frequency Radiation and Asperity Ruptures, Revealed by Hybrid Back-projection with a Non-planar Fault Model, Sci. Rep., Nature Publishing Group, 2014, doi:10.1038/srep07120.
- 13. Yagi, Y., Okuwaki, R., Enescu, B., Hirano, S., Yamagami, Y., Endo, S., & Komoro, T., Rupture process of the 2014 Iquique Chile earthquake in relation with the foreshock activity, Geophys. Res. Lett., AGU, 2014, doi:10.1002/2014GL060274.

# 専門分野

地震学 地球物理学

# 使用言語

日本語,英語 Fortran, Python, matplotlib, GMT, SAC, UNIX utilities

## 所属学会

アメリカ地球物理学連合 (AGU) 日本地球惑星科学連合 (JpGU) アメリカ地震学会 (SSA) 日本地震学会 (SSJ) 南カルフォルニア地震センター (SCEC)

### その他の活動

地球惑星科学NYS事務局