

# Kurama OKUBO

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*Harvard University  
Department of Earth and Planetary Sciences, 20 Oxford Street, Cambridge, MA, 02138*

## EDUCATION

2018/11	<b>Ph. D.*</b>	<i>Earth Sciences, Environments and Planets Institut de Physique du Globe de Paris, France</i>
2015/03	<b>M. E.</b>	<i>Civil and Earth Resources Engineering Kyoto University, Japan</i>
2014/06	<b>M. S.</b>	<i>Earth Sciences, Environments and Planets Institut de Physique du Globe de Paris, France</i>
2013/03	<b>B. E.</b>	<i>Global Engineering Kyoto University, Japan</i>

*\*Advisors : Dr. Harsha S. Bhat & Dr. Yann Klinger*

## RESEARCH EXPERIENCE

2019.01 - present	Post-Doctoral Fellow at <b>EPS, Harvard University</b>
2016.05 - 2018.12	Working at <b>Laboratoire de Géologie, Ecole Normale Supérieure</b>
2017.10 - 2017.12	Research internship at <b>Los Alamos National Laboratory</b>
2016.11 - 2016.12	Research internship at <b>Los Alamos National Laboratory</b>

## RESEARCH INTEREST

Earthquake source physics.

*Doctoral dissertation: Dynamic earthquake ruptures on multiscale fault and fracture networks*

## GRANTS

2015.10 - 2018.09	<b>Ph.D. Funding</b> <i>Contrats doctoraux Université Sorbonne Paris Cité 2015 Volant International</i>
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## AWARDS

- [1] 2018.04: **EGU Outstanding Student Poster and PICO (OSPP) Awards**: Okubo, K., Bhat, H. S., Lei, Z., Knight, E.E., Rougier, E. and Klinger, Y. *Overall energy budget of earthquake rupture with dynamically generated off-fault crack network*, EGU General Assembly Conference (Vienna, Austria)

## REFEREED PUBLICATIONS, PAPERS IN REVIEW & IN PREPARATION

- [1] Okubo, K., Bhat, H. S., Rougier, E., Marty, S., Schubnel, A., Lei, Z., Knight, E. E. & Klinger, Y. *Dynamics, radiation and overall energy budget of earthquake rupture with coseismic off-fault damage, under review. J. Geophys. Res.*
- [2] Klinger, Y., Okubo, K., Vallage, A., Champenois, J., Delorme, A., Rougier, E., Lei, Z., Knight, E. E., Munjiza, A., Satriano, C., Baize, S., Langridge, R. & Bhat, H. S. *Earthquake damage patterns resolve complex rupture processes, Geophys. Res. Lett.* doi:10.1029/2018GL078842.

## PRESENTATIONS

### ► Oral presentations

- [1] 2019. Okubo, K., Bhat, H. S. & Rougier, E. *Dynamic earthquake ruptures with coseismic off-fault damage on finite faults and fault kinks*, **EGU General Assembly Conference** (Vienna, Austria).

- [2] 2017. Okubo, K., Bhat, H. S., Rougier, E., Lei, Z., Earl, K. E. & Klinger, Y. *Dynamic fracture network around faults: implications for earthquake ruptures, ground motion and energy budget*, **AGU Fall Meeting** (New Orleans, USA).
- [3] 2017. Okubo, K., Bhat, H. S., Klinger, Y. & Rougier, E. *Modeling dynamic earthquake rupture with coseismic off-fault damage*, **IAG-IASPEI Symposia** (Kobe, Japan).
- [4] 2017. Okubo, K., Bhat, H. S., Klinger, Y. & Rougier, E. *Earthquake rupture modelling on complex fault systems and complex media*, **6th International Conference on Coupled THMC Processes in Geosystems** (Paris, France).
- [5] 2017. Okubo, K., Bhat, H. S., Klinger, Y. & Rougier, E. *Modelling earthquake ruptures with dynamic off-fault damage*, **EGU General Assembly Conference** (Vienna, Austria).

#### ► Poster presentations

- [6] 2018. Okubo, K., Bhat, H. S., Rougier, E. & Klinger, Y. *Radiation and overall energy budget of earthquake ruptures with secondary dynamic fracturing in off-fault medium*, **AGU Fall Meeting** (Washington, D.C., USA).
- [7] 2018. Okubo, K., Bhat, H. S., Rougier, E. & Klinger, Y. *The role of off-fault damage in rupture dynamics, radiation and overall energy budget*, **International School of Physics, Enrico Fermi, "Mechanics of Earthquake Faulting"** (Varenna, Italy).
- [8] 2018. Okubo, K., Bhat, H. S., Rougier, E. & Klinger, Y. *Off-fault fracture network induced by dynamic earthquake rupture*, **50 Years of Plate Tectonics: Then, Now, and Beyond** (Collège de France, Grand Amphithéâtre, Paris, France).
- [9] 2018. Okubo, K., Bhat, H. S., Klinger, Y. & Rougier, E. *Overall energy budget of earthquake rupture with dynamically generated off-fault crack network*, **EGU General Assembly Conference** (Vienna, Austria).
- [10] 2018. Okubo, K., Bhat, H. S., Rougier, E., Vallage, A., Champenois, J. & Klinger, Y. *Distributed deformation field due to coseismic off-fault damage of Mw 7.8 Kaikoura earthquake*, **EGU General Assembly Conference** (Vienna, Austria).

#### ► Seminars

- [11] 2019. Okubo, K., Bhat, H. S., Rougier, E. & Klinger, Y. *Modeling dynamic earthquake ruptures on multiscale fault and fracture networks*, **BiSEPPS Seminar, Harvard University** (MA, USA).
- [12] 2018. Okubo, K., Bhat, H. S., Rougier, E. & Klinger, Y. *Dynamic earthquake rupture modelling with coseismic off-fault damage : from theory to application to the 2016 Mw 7.8 Kaikōura earthquake*, **BRGM** (Orléans, France).
- [13] 2017. Okubo, K., Bhat, H. S., Rougier, E. & Klinger, Y. *Off-fault damage induced by dynamic earthquake rupture: Implications for rupture process, radiation and energy budget*, **Los Alamos National Laboratory** (NM, USA).
- [14] 2017. Okubo, K., Bhat, H. S., Rougier, E. & Klinger, Y. *Evolution of secondary crack network around faults induced by dynamic earthquake rupture*, **National Research Institute for Earth Science and Disaster Resilience** (Tsukuba, Japan).
- [15] 2017. Okubo, K., Bhat, H. S., Rougier, E. & Klinger, Y. *Off-fault fracture network induced by dynamic earthquake ruptures*, **UMR Géoazur** (Nice, France).
- [16] 2016. Okubo, K., Bhat, H. S., Rougier, E. & Klinger, Y. *Earthquake rupture modeling on complex fault systems and complex media*, **Los Alamos National Laboratory** (NM, USA).

### COMPUTER SKILLS

Languages & Software: C/C++, Fortran90/95, Julia, Python, Matlab, HTML, php, SQL, Cubit (Trelis).

### LANGUAGES

English (Fluently), French (Basic), Japanese (Native).