

# Kana Ishimaru

kana@orex.lpl.arizona.edu  
520-499-8293

## EDUCATION

---

**The University of Arizona** August 2019 - Present  
PhD student at the Lunar and Planetary Laboratory

**The University of Tokyo** April – July 2019  
Master student in the Department of Earth and Planetary Science, Graduate School of Science

**The University of Tokyo** April 2015 – March 2019  
B.S. in Earth and Planetary Environmental Science  
Thesis: “Dehydration and Recrystallization Experiment of Serpentine for Understanding Thermal History of Hydrated Asteroids”

## PUBLICATION

---

Tasker E. J., **Ishimaru K.**, Guttenberg N., and Foriel J. (2019) Earth-Like: An Education & Outreach Tool for Exploring the Diversity of Planets Like Our Own. *International Journal of Astrobiology*

## FIELD WORK

---

**Evolution of Planetary Surface Field Work | 3 days in Flagstaff, AZ** November 2019

- Documented the local stratigraphy in the meteor crater and Colorado Plateau area.
- Observed lava tube which turned into a cave.

**Yunnan Geologic Field Work | 10 days in Yunnan, China** February 2018

- Visited the Stone Forest, limestone karst.
- Searched for fossils of Chengjiang Fauna from the early Cambrian.
- Visited dinosaur fossil site from the Jurassic.

**UTokyo and Australian National Univ. Joint Excursion | 7 days in Tohoku, Japan** September 2017

- Documented tsunami sediments from 2011 great Tohoku earthquake.
- Visited schools and local residents to understand the catastrophe of the tsunami.

**Mt. Fuji Volcanic Field Work | 5 days in Shizuoka, Japan** September 2017

- Documented eruption crater of Mt. Hoei.
- Collected soil samples near Mt. Fuji and made thin sections for mineralogic analysis.

**Kiyosumi Geologic Field Work | 5 days in Chiba, Japan** August 2017

- Created local stratigraphic histogram and geological map of Kiyosumi river.
- Measured strike and dip of faults while walking in the river.
- Collected sand samples for particle size sorting analysis and thin sections.

**Jogashima Geologic Field Work | 3 days in Kanagawa, Japan** June 2017

- Created local stratigraphic histogram and geological map of Jogashima island.
- Documented faults and folds due to the movement of the island.

- Collected volcanic samples such as scoria and pumice to analyze.

**Boso Peninsula Geologic Field Work | 3 days in Chiba, Japan**

April 2017

- Documented volcanic rocks and metamorphic rocks.

PRESENTATIONS

---

**Japan Geoscience Union – American Geophysical Union 2020**

July 2020

Virtual oral presentation and iPoster: “Apparently Layered Boulders with Multiple Textures on Bennu’s Surface”

**The Lunar and Planetary Science Conference**

March 2020

Canceled due to COVID-19. Oral presentation: “Linearly Layered Boulders with Multiple Textures on Bennu’s Surface”

**Lunar and Planetary Laboratory Conference**

August 2019

Oral presentation: “Dehydration and Recrystallization Experiments of Serpentine for Understanding Thermal History of Hydrated Asteroids”

**The 82<sup>nd</sup> Annual Meeting of the Meteoritical Society**

July 2019

Poster: “Dehydration and Recrystallization Experiments of Serpentine for Understanding Thermal History of Hydrated Asteroids”

**Japan Geoscience Union 2019**

May 2019

Oral presentation in Japanese: “Thermal Evolution of Hydrous Minerals on Small Bodies: To Understand Thermal Histories of Ryugu and Bennu”

**May Festival at the University of Tokyo**

May 2019

Oral presentation in Japanese: “Hayabusa 2, Exploration of the Origin of the Earth Life”

**Solar System Symposium in Sapporo 2019**

February 2019

Poster: “Thermal Evolution of Hydrous Minerals on Small Bodies: To Understand Thermal Histories of Ryugu and Bennu”

**Japan Geoscience Union 2018**

May 2018

Poster: “What If We Run Out of Ocean?”

RESEARCH and PROFESSIONAL EXPERIENCE

---

**Teaching Assistant | The University of Tokyo**

April – July 2019

Supervisor: Dr. Shogo Tachibana

- Assisted undergraduate students with identifying minerals in thin sections using optical microscopes.

**Satellite Design Contest**

April – July 2019

Mentor: Dr. Hiroumi Tani

- Designed a CubeSat landing mission to Deimos with a team of students in science and engineering for a contest supported by various ministries, companies, and institutions in Japan.
- Led designing scientific instruments, including optical cameras, infrared spectrometer, and X-ray spectrometer.
- Awarded Japan Space Forum Award.

**Research Internship | The University of Arizona**

May – August 2018

Supervisor: Dr. Dante Lauretta

- Funded by the SVAP grant program of the Faculty of Science, the University of Tokyo.
- Investigated Cr content in olivine grains in carbonaceous and ordinary chondrites.
- Analyzed meteorite samples with EMP and EBSD at LPL and with  $\mu$ -FTIR at Southwest Research Institute, Boulder CO.

**Technical Trainee | JAXA**

August 2017 – March 2018

Supervisor: Dr. Elizabeth Tasker

- Developed a model of the Earth based on carbon cycle using Python.
- Created an interactive website of the model for outreach.
- Presented the results at JpGU 2018.

**AWARDS and GRANTS**

---

<b>Japan Space Forum Award. Satellite Design Contest</b>	2019
<b>O. Richard Norton Award. The Meteoritical Society</b>	2019
<b>Study and Visit Abroad Program 2018. The University of Tokyo</b>	2018

**SKILLS**

---

**Research instruments:** SEM, TEM, EMP, FIB,  $\mu$ -FTIR, FTIR, XRD, EBSD, optical microscope, can make thin sections by hand.

**Programming:** Python, MATLAB, Fortran, R, DaVinci, HTML, CSS, Bottle, pythonanywhere, C++

**Applications:** Microsoft office, Adobe illustrator, photoshop, lightroom, Small Body Mapping Tool, USGS ISIS3, SAOImage DS9, Meshlab, Cloud Compare, Blender, ArcMap

**Languages:** Japanese – native, English – proficient

**AFFILIATIONS**

---

<b>Japan Geoscience Union</b>	2018 - Present
<b>SEDS the University of Tokyo/ SEDS Japan</b>	2017 – 2019
<ul style="list-style-type: none"><li>• President of SEDS UTokyo/ Japan in 2018</li></ul>	