

Ryota Fuse

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Graduate School of Science and Technology
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Education

M.S. in Aerospace Engineering (April 2017-)

Department of Aerospace Engineering, Nihon University, Japan
Advisor: Associate Prof. Shinsuke Abe

B.S. in Aerospace Engineering (March 2017)

Department of Aerospace Engineering, Nihon University, Japan
Advisor: Associate Prof. Shinsuke Abe

Bachelor Thesis: “*Observation of Lunar Impact Flash by Deep-Space 6U-class Spacecraft “EQUULEUS”*”

Teaching Experience

Graduate Teaching Assistant (April 2017 - March 2019)

Aerospace Engineering Experiment, Prof. in charge: Associate Prof. S. Abe

Projects

APPROACH (2018-present), PI: Associate Prof. S. Tanaka

- working on *an onboard camera system design*
- JAXA's M-class mission Working Group to clarify origin and evolution of the Moon by Penetrator (concept study phase)
- one of science missions, space-based observation of lunar impact flashes by an onboard camera from lunar low orbit

EQUULEUS (2016-present), PI: Associate Prof. R. Funase

- working on *an onboard camera system development*, “*DELPHINUS*”
- JAXA's CubeSat mission to explore cis-lunar space with low energy transfer, one of 13 CubeSat payloads on NASA's SLS-EM1
- one of 3 science missions, space-based observation of lunar impact flashes by “*DELPHINUS*” from Earth-Moon Lagrangian L2 point

Honors & Awards

Student Session Finalist(2017): Individual honor

In 31st International Symposium on Space Technology and Science

Title: “*The Study of the Space-Based Observation of Lunar Impact Flashes*”

Outstanding Presentation Award(2017): Group award

In 61st Nihon University College of Science and Technology Academic Workshop

Title: “*Performance Test of DELPHINUS onboard Small Deep-space CubeSat*”

Outstanding Presentation Award(2016): Individual award

In 60th Nihon University College of Science and Technology Academic Workshop

Title: “*Observing Lunar Impact Flash using DELPHINUS onboard EQUULEUS*”

**Journal
Publication**

1. **R. Fuse**, S. Abe, M. Yanagisawa, R. Funase and H. Yano, “Space-based Observation of Lunar Impact Flashes,” *Transactions of the Japan Society for Aeronautical and Space Sciences*. (January, 2018, accepted)

**Conference
Proceedings**

First author

1. **R. Fuse** and S. Abe, “Observation of Lunar Impact Flashes from Earth Moon Lagrange Point,” In *13th Impact Research Meeting*, Hyogo, Japan, November, 2017.
2. **R. Fuse** and S. Abe, “Observation of Lunar Impact Flashes from Earth Moon Lagrange Point,” In *61st Space Sciences and Technology Conference*, 2017-P72, Niigata, Japan, October, 2017.
3. **R. Fuse**, “The Study of the Space-Based Observation of Lunar Impact Flashes,” In *31st International Symposium on Space Technology and Science*, 2017-s-15-k, Matsuyama, Japan, June, 2017.

Student Session Finalist

4. **R. Fuse**, S. Abe, M. Yanagisawa, H. Yano and R. Funase, “Observations of Lunar Impact Flashes and NEOs from Earth-Moon L2 Halo Orbit,” In *5th IAA Planetary Defense Conference*, PDC-17-05-P35, Tokyo, Japan, May, 2017.
5. **R. Fuse** and S. Abe, “Observing Lunar Impact Flash using DELPHINUS onboard EQUULEUS,” In *60th Nihon University College of Science and Technology Academic Workshop*, K7-80, Tokyo, Japan, December, 2016.

Outstanding Presentation Award

Co-author

1. R. Yamada, M. Yanagisawa, S. Abe, T. Fukuhara, T. Kawamura, K. Onodera, **R. Fuse**, K. Shirai, S. Tanaka, Y. Ishihara, H. Shiraishi, M. Wiczoreck, “The lunar impact flash observations among two nations and application of the results to future lunar seismic experiments,” In *JpGU2018*, PPS05-09, Chiba, Japan, May, 2018.
 2. S. Abe, M. Yanagisawa, H. Yano, R. Funase, S. Ikari, **R. Fuse**, Y. Masuda, R. Shimada, K. Yamamoto and R. Kobayashi, “Development of Lunar Impact Observing Camera DELPHINUS onboard EQUULEUS,” In *18th Space Science Symposium*, P-096, Kanagawa, Japan, January, 2018.
 3. Y. Masuda, S. Abe, **R. Fuse**, M. Yanagisawa, H. Yano and R. Funase, “Performance Test of DELPHINUS onboard Small Deep-space CubeSat,” In *61th Nihon University College of Science and Technology Academic Workshop*, K7-85, Tokyo, Japan, December, 2017.
- Outstanding Presentation Award**
4. S. Abe, M. Yanagisawa, H. Yano, R. Funase and **R. Fuse**, “Mining Earth’s Mini-moons near Cislunar Space by 6U Spacecraft,” In *61st Space Sciences and Technology Conference*, 2017-2D16, Niigata, Japan, October, 2017.
 5. Y. Masuda, **R. Fuse**, S. Abe, M. Yanagisawa, R. Shimada, S. Ikari, M. Ikura, H. Yano and R. Funase, “Development of Lunar Impact Observing Camera DELPHINUS onboard EQUULEUS,” In *The Japanese Society for Planetary Science Fall Meeting 2017*, P63, Osaka, Japan, September, 2017.

6. S. Abe, **R. Fuse**, M. Yanagisawa, H. Yano, R. Funase and DLP team,
“Development of Lunar Impact Flash Near-Earth Asteroid Observing Camera DELPHINUS on Deep-space 6U Spacecraft EQUULEUS”, In *2017 Asia-Pacific Regional IAU Meeting*, P1-21, Taipei, Taiwan, July, 2017.
7. S. Abe, M. Yanagisawa, **R. Fuse**, K. Oguri, M. Ikura, H. Yano and R. Funase,
“Development of DELPHINUS camera system onboard EQUULEUS,” In *17th Space Science Symposium*, P-025, Kanagawa, Japan, January, 2017.

Last updated: May 24, 2018