

Press Release

March 7, 2025
ispace, inc.
Chuo University**ispace and Chuo University Agree to Collaboration Plan to Transport Small AI Robots for Future Lunar Lava Tube Exploration**

TOKYO –March 7, 2025 – ispace, inc. (ispace) ([TOKYO: 9348](#)), a global lunar exploration company, and Chuo University announced today a memorandum of understanding to study the feasibility of transporting multiple small robots equipped with AI to the lunar surface in order to explore lava tubes that have been discovered on the Moon. The agreement furthers the implementation of the Japanese government’s Cabinet Office Moonshot Research and Development Program.

Through the memorandum of understanding, ispace and Chuo University have agreed to cooperate in the implementation of the Lunar Lava Tube Exploration Mission, which will transport the swarm robots equipped with AI, developed by the Chuo University Moonshot, to the Moon's surface in multiple missions from 2028 onwards. The project focuses on “evolvable swarm robots that can share intelligence to settle in unknown and unexplored areas” and is led by Professor Yasuharu Kunii of Chuo University’s Faculty of Science and Engineering.



A computer-generated image of a potential lunar base constructed in the lunar lava tubes as planned for 2050.

“The signing of this memorandum is a primary example of ispace providing opportunities for technology demonstrations on the Moon as part of the Japanese government’s Cabinet Office

Moonshot Research and Development Program,” said Takeshi Hakamada, Founder & CEO of ispace. “As part of our business model, ispace will support pioneering projects by providing transportation services to landing sites that meet the needs of our customers.”

“With the signing of this memorandum of understanding and the start of collaboration between the university and ispace, I feel that the space age is drawing closer,” said Hisashi Kawai, President of Chuo University. “I am delighted that the research and development of Chuo University will lead the space age and become the driving force for opening up the future.”

“The synergy between our Moonshot team's AI and robot exploration mission technology and ispace's transportation technology will create the next Japanese and world firsts in Japan's space exploration technology.,” said Professor Yasuharu Kunii, Faculty of Science and Engineering, Chuo University. “I am confident that by shedding light on the future potential of using difficult environments, such as the underground space in the moon, we can grasp the future of humanity and contribute to the expansion of our knowledge and humanosphere.”

About the Cabinet Office Moon Shot Research and Development Program and the Kunii Moonshot at Chuo University

The Cabinet Office Moonshot Research and Development Program promotes research and development based on bold ideas that go beyond the extension of conventional technology, with the aim of creating disruptive innovation originating in Japan. The Kunii Moonshot Project at Chuo University is conducting research and development on the goal 3 of this program, “By 2050, realize robots that can learn and act on their own and coexist with humans through the co-evolution of AI and robots,” which involves the formation of swarms of small robots with simple functions that demonstrate collective network intelligence, and the research and development of a system in which the entire group evolves through the updating and expansion of common functions.

For more information, visit: <https://moonshot.r.chuo-u.ac.jp/kunii/>

Lunar lava tubes were discovered by the Japanese lunar orbiter Kaguya and are thought to have been formed by lava flows beneath the surface of the Moon. Because the temperature inside lava tubes changes little and the risk of radiation and meteorites is reduced, it is expected that they will serve as strong candidates for the sites of construction of future manned exploration bases.

Through research and development by the Kunii Moonshot Project at Chuo University, a swarm of low-function small robots will be automatically organized and controlled by advanced strategic intelligence (network intelligence) installed in each robot, enabling them to explore the inside of lunar lava tubes, survey habitable areas, and transport spherical robot containers. In addition, missions inside the side holes of lunar lava tubes will be carried out to obtain information necessary for subsequent research and development. It is expected that based on this research, full-scale lunar city development phase may begin.

Currently, ispace is actively operating the SMBC x HAKUTO-R Venture Moon Mission 2 and has achieved 5 of the 10 mission milestones. Most recently, the RESILIENCE lunar lander successfully completed a flyby of the Moon on Feb. 15, 2025, reaching its closest point to the lunar surface at 22:43 UTC, Feb. 14, 2025. It has navigated to a point 1.1 million km from Earth. RESILIENCE is currently scheduled to land on the Moon on June 6, 2025 (JST).

Future Missions

ispace is leveraging its global presence through its three business units in Japan, the U.S., and Luxembourg, for the simultaneous development of upcoming missions. Mission 2, featuring the RESILIENCE lunar lander and led by ispace Japan, launched on Jan. 15, 2025, completed a lunar flyby on Feb. 15, 2025, and is currently traveling to the Moon. During the mission, the TENACIOUS micro rover will be deployed on the lunar surface to conduct a technological demonstration of regolith extraction as well as mobility on the lunar surface. Mission 3, debuting the APEX 1.0 lunar lander, is led by ispace-U.S. and is expected to launch in 2026. The company's fourth mission, which will utilize the Series 3 lander, currently being designed in Japan, is scheduled to be launched by 2027.

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About ispace

ispace, a global lunar exploration company with the vision, "Expand our Planet. Expand our Future.", specializes in designing and building lunar landers and rovers. ispace aims to extend the sphere of human life into space and create a sustainable world by providing high-frequency, low-cost transportation services to the Moon. The company has business entities in Japan, Luxembourg, and the United States with approximately 300 employees worldwide.

For more information, visit: www.ispace-inc.com and follow us on X: [@ispace_inc](https://twitter.com/ispace_inc).

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