FY2022 ARC-Space Joint Research Program
Proposal Submission Guidelines

June 1, 2022
ARC-Space, The University of Aizu

1 Objective of the Program

ARC-Space aims to promote research in the field of space informatics, which integrates space science and informatics, through industry-academia collaboration, and to provide the results to the academic community, thereby contributing to the vitalization of research in the field and to the advancement of its technological development. ARC-Space was certified as a joint usage/research center for Lunar and Planetary Exploration Archive Science, by the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT) in FY2019.

Lunar and planetary exploration archive science refers to a form of research in which new insights are obtained by combining data obtained and accumulated through past lunar and planetary exploration and observational research with the latest knowledge and analysis techniques.

As one of the major activities of ARC-Space, we will be offering Joint Research Program for research carried out between researchers in the academic community and faculty members of ARC-Space. We will be accepting proposals in two categories; Exploratory Research, which is for preliminary stage of R&D, and Practical Research, which is for full-scale R&D including collaboration with industry. We will be calling for themes that promote the lunar and planetary exploration archive science and contribute to the community through, among other things, enhancing the value of lunar and planetary exploration data, the development/maintenance of analysis tools, and the provision of services. Applicants for this program may also apply for the Joint Research Program with Invited International Researchers and Overseas Travel Grants Program at the same time.

2 Details of the Program

There are two research categories: Exploratory Research and Practical Research. Applicants for one category can also apply for the other category.

(1) Exploratory Research

The Exploratory Research category is for exploratory studies, prototype evaluation, etc. and other preliminary research before full-scale R&D aimed at enhancing the value of lunar and planetary exploration data, the development of analysis tools. Around five proposals will be selected to receive research grants of up to 400,000 yen. A small number of proposals may be selected for adoption without the allocation of grant funding following consultation with the applicant depending on the content of the proposal.

In addition, we recommend applicants to proactively propose Practical Research themes developed from their adopted Exploratory Research projects (regardless of whether they were allocated research funds) in the subsequent fiscal years.

<Research Themes>
  (a) Analysis of lunar and planetary exploration data using existing tools
  (b) Evaluation of prototype lunar and planetary exploration data analytics tools
  (c) Investigation of new lunar and planetary exploration data analytics tools
  (d) Investigation of high value-added lunar and planetary exploration data
  (e) Other research related to lunar and planetary exploration archive science

(2) Practical Research

The Practical Research category is for full-scale R&D aimed at enhancing the value of lunar and planetary exploration data, and the development/maintenance of practical data analysis tools, including collaboration with industry. One or two proposals will be selected to receive a research grant of up to 4,000,000 yen.

<Research Themes>
    (a) Research and development of practical lunar and planetary exploration data analysis tools
    (b) Research on increasing the added value of lunar and planetary exploration data
    (c) Development and evaluation of new analysis methods for lunar and planetary exploration data
    (d) Development of a system for the release and distribution of lunar and planetary exploration data and analysis tools
    (e) Other practical research and development related to lunar and planetary exploration archive science

3 Qualified Applicants

Joint Research will be conducted by the following (1), (2), and (3). Those who fall under (1), (2), or (3a) must be listed in an application form. At least one faculty member of ARC-Space must be included as a Principal Investigator or a Co-Investigator. In addition, regarding Practical Research projects, it is recommended that companies, etc. that conduct research and development be involved in the projects with an aim to create practically useful research results.

PIs and Co-Is must undergo research ethics training offered by their universities, research institutions, or JSPS prior to the start of joint research.

(1) Principal Investigator

PI must be one of the following.
    a. Faculty members of national, public, and private universities, researchers of research institutes(including ARC-Space), or equivalent researchers (including technical staff of national, public, and private universities)
    b. Individuals recognized as equivalent to (a) by the Director of ARC-Space

(2) Co-Investigators

Co-Is must be one of the following.
    a. Faculty members of national, public, and private universities, researchers of research institutes (including ARC-Space), or equivalent researchers (including technical staff of national, public, and private universities)
    b. Individuals from the private sector (including venture companies) or independent engineers/researchers
    c. Graduate students of national, public, and private universities
    d. Others who are deemed as particularly necessary by the Director of ARC-Space

(3) Research Collaborators

Research Collaborators must be one of the following.
    a. Researchers or graduate students of overseas universities or research institutions
    b. Others engaged in the research in collaboration with the PI or Co-Is.

4 Implementation Period

The period of the joint research is from the date of notification of acceptance to March 31, 2023 (Friday).

5 How to Apply
(1) You can download the application form (Form 1) from ARC-Space's website. Please refer to the following URL:

https://arcspace.jp/jointresearch:top
(2) E-mail the completed application form to the address in 12 Submission Address and Contact Information.
(3) Before applying for the program, applicants may consult with the ARC-Space's faculty members regarding the joint research themes, research content, expenses, the selection of researchers from among the ARC-Space's faculty members, participation of companies and other topics, if necessary.
(4) Application forms must be in English or Japanese.
(5) Graduate students participating in the joint research must be covered by insurance coverage equivalent to or greater than the Personal Accident Insurance for Students Pursuing Education and Research (including the liability insurance) of the Japan Educational Exchanges and Services.

6 Research Expenses, etc.
(1) Eligible Expenses
The following expenses can be applied for when conducting joint research.
    a. Outsourcing expenses (software development, provision of services, etc.)
    b. Expenses for the purchase of goods/consumables (limited to those used for joint research)
    c. Honoraria for research supporters (students, etc.)
    d. Travel expenses (limited to travel expenses for visits to ARC-Space and presentations of joint research results)
(2) Payment Method
ARC-Space will reimburse the joint research expenses upon request based on the designated documents submitted by the successful applicant for expenditures of less than 500,000 yen, for (1b) through (1d) above. However, ordering and acceptance inspection of (1a) and items of 500,000 yen or more will be conducted by ARC-Space.

Items purchased for 100,000 yen or more will be regarded as equipment of the University of Aizu, and the handling of such items after the joint research period will be stipulated and notified separately.

7 Application Period
Exploratory Research: Wednesday, June 1, 2022 - Monday, July 4, 2022
Practical Research: Wednesday, June 1, 2022 - Monday, July 4, 2022

8 Adoption of Joint Research Proposals
(1) Acceptance or rejection of a joint research proposal will be discussed by the Proposal Solicitation and Selection Committee and decided by the Steering Committee.
(2) During deliberations, applicants may be asked to provide explanations as necessary.

(3) During deliberations on Practical Research categories, ARC-Space will coordinate with the applicant regarding the nature of collaborations with industry to obtain research results, and the allocation of research funding for developments, etc.

(4) We will notify applicants of the result of acceptance or rejection. Please note that if accepted, the title of the research project, the names and affiliations of the applicants will be posted on ARC-Space's website.

9 Joint Research Report

(1) Please submit the "Report on ARC-Space Joint Research" (hereinafter referred to as "Research Report") in an A4-sized Microsoft Word document in English or Japanese to the email address in 12 Submission Address and Contact Information by April 26, 2023 (Wednesday).

(2) Please note that if you fail to submit the Research Report by the deadline without a particular reason, we will not accept your application for this program for the following year. You can download the Research Report form (Form 2) from ARC-Space's website. Please refer to the following URL:

> https://arcspace.jp/jointresearch:top

10 Publication of Results

(1) After the research period, the results of the joint research will be published on ARC-Space's website based on the contents of the "Publication Status of Results" in the Research Report. At this time, inquiries may be made to the PIs of selected research projects regarding the publication status of the results after the submission of the Research Report.

(2) Applicants may be asked to present their research plans and results at conferences organized by ARC-Space.

(3) If accepted PIs/Co-Is publish the results of joint research (including academic papers, conference presentations, etc.), please indicate in the acknowledgements section that the research was conducted jointly by ARC-Space. Please refer to the following example sentences.

- This work was supported by MEXT Promotion of Distinctive Joint Research Center Program Grant Number JPMXP0619217839.

In addition, please submit information on the publication, bibliographic information on the paper, a copy of the paper, etc. to the e-mail or mailing address in 12 Submission Addresses and Contact Information.

11 Handling of Intellectual Property Rights Arising from Joint Research

In principle, intellectual property rights arising from joint research shall belong to the inventor in the case of an invention, etc., and to the author in the case of a publication. In consideration of the role of ARC-Space, it is assumed that software such as analysis tools, data to which value has been added, and services developed, and other products of the joint research shall be published at the same time as the Research Report is submitted and will be available for free use by researchers.

However, depending on the progress of the research, a period of exclusivity of up to one year after the end of the joint research period may be set. Regarding the server resources required for publication, applicants will be able to use the resources currently in operation at ARC-Space.

12 Submission Address and Contact Information

Mailing Address:

    90 Kamiiawase, Tsuruga, Ikki-machi, Aizuwakamatsu, Fukushima 965-8580 JAPAN

    Administrative Office of Aizu Research Center for Space Informatics, The University of Aizu

    (Planning and Collaboration Division)

Tel.: +81 242-37-2511 (business hours: 8:30-17:15)

Fax: +81 242-37-2546

E-mail: arcspace-kobo@u-aizu.ac.jp

[Reference]

If you need to consult with ARC-Space's faculty members regarding the joint research themes, research content, expenses, the selection of CIs from among the ARC-Space's faculty members, participation of companies, and other topics (see 5(3)), please refer to the list below.

Professor DEMURA Hirohide	demura@u-aizu.ac.jp
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