

Announcement of Opportunity for an Associate Professor Position
at the Institute of Space and Astronautical Science, the Japan Aerospace Exploration Agency

The Japan Aerospace Exploration Agency (JAXA) is seeking to recruit an Associate Professor with a profile as described below. We widely call for recommendations and encourage applications of qualified candidates.

1. Title and Number of Position

One Associate Professor (Academic Staff)

2. Department

Department of Space Flight Systems, Institute of Space and Astronautical Science (ISAS)

3. Summary of Position (Duties and Required Abilities)

For the further advancement of future space science missions, the field of materials science and engineering needs to play a significant role in reducing the weight and improving the performance of spacecraft and drive devices, and in achieving higher thrust in propulsion systems. For example, the application of functional materials to improve the performance of heat switches is expected to make a significant contribution to the thermal control of spacecraft in harsh temperature environments such as outer space and the lunar surface. In addition, by developing a heat switch that can be applied to the cryogenic environment around the refrigeration unit of an astronomical satellite, a number of refrigeration units can be omitted in the cooling systems, and it will result in significant reduction in weight and power consumption of the cooling system. In the propulsion system, the use of functional materials in the upper stage rocket motor would realize a deployable nozzle which contributes to more launch capability by reducing the size of interstage joints and increasing the nozzle opening ratio. In addition, realizing large-size components with higher heat resistant materials will lead to development of higher performance thrusters for future lunar and planetary explorers. Moreover, secure development of space science missions requires high level insight into materials, including analysis and characterization of them.

With the above in mind, the Institute of Space and Astronautical Science has been working on the application of functional materials such as shape memory alloys adaptable to space environment, and on the research of dissimilar material joining technology for high heat resistant materials. In order to steadily realize more advanced space science missions in the future, the Department of Space Flight Systems promotes research in the field of materials science and engineering.

The associate professor to be recruited this time will be requested to propose and develop devices utilizing functional materials for application to spacecraft systems, promote materials research to enable higher performance and larger size of spacecraft thrusters, and support space science projects through applying his/her expertise in materials engineering during the development process of

spacecraft and when failures occur.

To fulfill the above duties, the associate professor must meet at least the following conditions

- Having research experience in metallic materials engineering and an excellent track record in the field of functional or heat resistant materials that has been evaluated in Japan and overseas.
- Demonstrating leadership in the field of materials engineering through conducting research on materials with application to future space science projects.
- Having a strong motivation to actively contribute to activities necessary to carry out space science projects, regardless of his/her area of expertise.
- Having the ability to educate and instruct graduate students.

ISAS/JAXA functions as a hub for the space science activities in Japan. While ISAS is a science institute of Japanese space agency JAXA, it is also embedded in the collaboration network among Japanese universities. Flight projects are the keys to promoting space science. In the network, ISAS, teaming up with other JAXA members as well as academic members outside JAXA, plays the special role of materializing flight projects. Thus, ISAS members are expected to play vital roles in running the projects.

We are looking for a highly motivated staff who can carry out his/her academic research in a project-oriented style, in collaboration with university researchers under the inter-university framework. Active participation to various JAXA projects and R&Ds to demonstrate his/her academic expertise is also expected. Human resource development for future space development and utilization is anticipated as natural outcome of the above-mentioned activities.

4. Terms and Conditions

- (1) Salary will be determined under the provision of JAXA wage rules and regulations, taking into account ability and experience.
- (2) Working days: Monday – Friday, except Japanese national holidays, year-end and New-Year holidays, annual vacation, WLB(Work Life Balance) annual leave, celebration or condolence leave, maternity leave, child-care leave, care leave, nursing leave, volunteer activities, etc.
- (3) Office hours: 9:30-17:45, in principle, with a recess from 12:15 to 13:00 (however, a discretionary labor system is applied).
- (4) Overtime work: may be required (however, a discretionary labor system is applied, and working hours per day are regarded as 7.5 hours).
- (5) Duty location: JAXA Sagami-hara campus (ISAS), Kanagawa, Japan.
- (6) Employment Status: Full-time/Retirement age is 63.
- (7) Lodgings: lodgings suitable for a family or a single occupant may be provided under the provision of JAXA in consideration of the nature of the work. (Lodging term is limited to 7 years.) Alternatively, an allowance for lodging shall be paid.

(8) Social insurances (health insurance, pension plan, etc.) will be provided in full.

5. Eligibility

PhD degree is required.

6. Commencement of Assignment

At the earliest possible date after selection. Some coordination might be needed according to JAXA's budget situation.

7. Application Documents

(1) Curriculum vitae

(2) Research career

(3) Summary of previous research

(4) List of research achievements

(5) Outline of future research plan (Including contribution to projects and ambitions for educational activities)

(6) List of awarded research funds through competition (type of funds, amount, principal investigator or co-investigator)

(7) Contact information of two referees (names, affiliation, telephone numbers, and e-mail addresses for a direct inquiry from JAXA).

(8) Photocopies of major research papers (up to 5) published in refereed academic journals

*If you are a resident of the European Economic Area (the EU zone), you are required to submit the following document as well.

(9) Consent form for handling personal information based on GDPR (Form NO.1)

Download the form from the website listed in "8. Submission"

8. Submission

Submit the application through the following website

<https://isas-appli-form.jaxa.jp/forms1/1630654660>

When submitting the documents, please follow the instructions given on the website. All of the files to be uploaded shall be in pdf format. Note that documents (2) to (6) should be merged into one pdf file.

If the applicant is recommended by others, we will request referee(s) to directly upload their letters of recommendation to the website. (This request will be automatically sent to the email addresses of referee(s) specified by the applicant. If the applicant is recommended by oneself, this request will not be automatically sent.) Application delivered in person or by mail shall not be accepted.

9. Application Deadline

November 16th, 2021, noon (JST).

Applies to both web input and all necessary files, including letters of recommendation for recommended applicants.

Please access the above website and check how to submit necessary documents for application (including letters of recommendation if the applicant is recommended by others) as soon as possible. If application is made to close to the deadline, it will be difficult for recommenders to submit a letter of recommendation. Please be careful with regard to this.

10. Contact at the Institute of Space and Astronautical Science, JAXA

Director of Department of Space Flight Systems:

Prof. Shujiro Sawai

E-mail: sawai.shujiro@jaxa.jp

For inquiries regarding Application Submission in Section 8:

Management and Integration Department Human Resources Section

E-mail: ISAS-JINJI@ml.jaxa.jp

11. Other Remarks

Screening will be conducted by the Advisory Council for Research and Management of ISAS, JAXA. Traveling expenses necessary for the examination and selection shall be borne at the applicant's own expense. ISAS/JAXA actively welcomes female applicants.

<Handling of Personal Information>

The personal information provided to ISAS/JAXA will be used and handled solely for the selection purpose. ISAS/JAXA will discard all personal information of unsuccessful applicants after the selection.

*<Consent form for handling personal information based on GDPR>

For the purposes of affairs related to the selection and human resource management, JAXA needs to collect your personal data requested in the present form.

You may at any time object to the use of your data for this purpose by writing to the following address: ISAS-JINJI @ml.jaxa.jp

You will find below all the detailed information concerning this processing of your personal data and a reminder of your rights, in application of the legislation in force. JAXA, willing to respect the privacy and protection of personal data of its prospects and clients, complies with the legislation in force regarding the protection of personal data as data controller, and in particular Law no. 78-17 of 6 January 1978 (the “Data Protection Act”) and, from 25 May 2018, Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of individuals with regard to the processing of personal data and the free movement of such data (the “GDPR”).

JAXA does not transfer personal data to third countries or parties outside the European Economic Area.

Personnel who transfer from National University Corporation, etc.* (hereinafter referred to as “previous position”) to JAXA Educational Employee will be treated under the following contents. However, personnel who have received his/her retirement allowance (including the equivalent payment) is excluded.

* National University Corporation, Inter-University Research Institute Corporation, National Institute of Technology, National Institution for Academic Degrees and Quality Enhancement of Higher Education, and National Center for University Entrance Examinations.

1. Period of Employment concerning Year-End Allowance
Employment period to the previous position will be added up to the tenure as a JAXA Educational Employee.
2. Regional Adjustment Allowance Guarantee
Regional adjustment allowance is guaranteed based on JAXA’s regulations, considering the work location on the day before the starting day at JAXA, in case of necessity.
3. Payment Requirements for Business Bachelor Allowance
Allowance may be paid for those who is continuingly a business bachelor from the previous position, only in case of fulfilling the requirements based on JAXA’s regulation.
4. Days of Annual Leave
Remaining days and time of the annual leave from the previous position will be taken over. Therefore, JAXA will need the acquired results of annual leave at the previous position.