

Job Announcement for a Professor at the Institute of Space and  
Astronautical Science, the Japan Aerospace Exploration Agency

The Japan Aerospace Space Exploration Agency (JAXA) is seeking to recruit a professor as described below. We widely call for recommendations and applications.

1. Title and Number of Position(s)

One Professor

2. Department

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

3. Summary of Position (Duties and Required Abilities)

As an international research center for solar-system exploration, the Institute of Space and Astronautical Science (ISAS) is promoting solar-system explorations such as Moon, planets and small bodies. To continuously produce world-class scientific output, unique mission design based on competitive spacecraft system is necessary, and among related technologies, research and development (R&D) of spacecraft propulsion system plays an essential role. In Japan, the HAYABUSA spacecraft established world's first interplanetary round-trip mission between the earth and an asteroid based on its high maneuver capability by using low-power ion thrusters. Recently, evolution of spacecraft technology for earth-orbiting satellites and interplanetary spacecrafts is continuing to execute large and advanced space missions. R&D of next generation spacecraft propulsion system is hence required to ensure competitiveness in the future large-scale space missions.

The professor being recruited in this announcement must provide strong leadership in research and development of next generation high-power plasma propulsion. "Plasma propulsion" denotes advanced spacecraft propulsion based on a variety of plasma acceleration processes, and typical examples are electric propulsions such as ion thrusters and Hall thrusters. After the success of HAYABUSA mission, the high potential and economical advantage of plasma propulsion are widely recognized and as a result, not only space-exploration missions but also earth-orbiting satellites frequently use plasma propulsion systems and the number of missions is growing. As a result, world-wide competition in related R&D becomes intense. Although Japan so far concentrated on low-power plasma propulsion, currently it is an urgent task to establish high-power plasma propulsion technology. To widen exploration region by ISAS and to continuously

promote excellent space science missions, it is necessary for the professor to be recruited to contribute to the development of high-power plasma propulsion and to promote innovative academic spacecraft propulsion research in a strategic way.

Responsibilities include (but are not limited to):

- Strengthen and lead ISAS's research activities on plasma propulsion to quickly realize space missions based on high-power plasma propulsion system;
  - Provide academic leadership and contribute to research and development through taking flight opportunities of high-power plasma propulsion not only at ISAS but also at JAXA;
  - Promote the future research on spacecraft systems and their own propulsion systems so as to extend the region and capability of ISAS's exploration to the whole solar system;
  - Promote collaboration with researchers from other universities based on the understanding that ISAS/JAXA acts as an inter-university research institute;
- and
- Engage in teaching and directing graduate students in the field of plasma propulsion.

Required qualifications include:

- Experience in research related to plasma propulsion for spacecraft, and achievements that are highly evaluated both in Japan and worldwide;
  - Ability to take leadership of research and development activities in the field of plasma propulsion based on a vision to establish short term (~5 years) applications and also long term (~10 years or more) programs;
  - Experience to have lead a community composed of multi-disciplinary researchers so as to promote innovative research in aerospace engineering.
- and
- Ability to teach and direct graduate students in the field of plasma propulsion and in related fields.

#### 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, paid vacation, summer vacation, 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 Sagamihara 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

Ph.D 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 (impact factors or numbers of quotations shall be specified)

(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, addresses, telephone numbers, and e-mail addresses for a direct inquiry from JAXA).

(8) Photocopies of major research papers (about five) 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/forms1/1533623822>

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 recommender(s) to directly upload their letters of recommendation to the website. (This request will be automatically sent to the email addresses of recommender(s) specified by the applicant.) Application delivered in person or by mail shall not be accepted.

## 9. Application Deadline

Monday, October 15, 2018, 9:30 (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. Eiichi Sato

Tel: +81-50-3362-2469      E-mail: sato@isas.jaxa.jp

For inquiries regarding Application Submission in Section 8:

Management and Integration Department

Human Resources Section

Fax: +81-42-759-8440      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.