

Job Announcement for an Associate 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 an associate professor as described below. We widely call for recommendations and applications.

1. Title and Number of Position(s)

One Associate Professor

2. Department

Department of Spacecraft Engineering, Institute of Space and Astronautical Science (ISAS)

3. Summary of Position (Duties and Required Abilities)

One of the major objectives of spacecraft engineering is to expand the capability of spacecraft, and the development of semiconductor devices tolerant of space radiation is one of the most important subjects in realizing that objective. To promote explorations to the moon, Mars, and other planets, new electronic devices for space use will be necessary, using such technologies as low-temperature semiconductors and low-power consumption devices.

ISAS has been conducting basic research, based on both theoretical and experimental methods, on the physical characteristics and circuit responses of semiconductor devices in a space radiation environment, which are different from those experienced in terrestrial applications. Based on these research activities, ISAS has also been developing high-performance semiconductor devices with a high radiation tolerance. We will continue developing semiconductor devices for space applications with long-term and strategic plans, and promote advanced academic research in the field of basic theories of semiconductor devices grounded in principles of radiation effects. At the same time, we will actively pursue research on the applications of radiation-tolerant space semiconductor devices to commercial equipment to be used on the ground.

Two years ago, JAXA started development of the next-generation Micro-Processing Unit (MPU) for spacecraft using Silicon on Insulator (SOI) technology as a project under JAXA's Research and Development Directorate, and ISAS is supporting this project from the aspect of basic theories of semiconductor devices. Furthermore, development of electronic devices for space use with a more long-term vision is necessary, such as development of low-temperature semiconductor technologies, and low-power consumption MPUs, plus technologies that enable efficient exploration with

small spacecraft with severe restriction of available resources. ISAS needs a researcher who has the leadership abilities to steer all activities related to the development of electronic devices for space applications in Japan, based on her/his own research activities and insights into electronic devices for space applications.

We hereby call for applicants for the position of associate professor at ISAS who will conduct basic research on semiconductor devices for space applications and will lead the overall development activities on electronic devices for space applications in Japan.

We will assign, at minimum, the following duties to the successful candidate:

- Conduct academic research on theories and measurement methods concerning radiation effects on semiconductor devices or electronic parts for space applications based on her/his own ideas;
- Support the ongoing project of developing the next generation SOI-MPU from the aspects of basic theories of semiconductor devices and lead all activities related to the development of electronic devices for space applications in Japan with long-term and strategic plans, based on her/his own research activities and insights into electronic devices for space applications; and
- Promote collaboration with researchers from other universities and engage in teaching and directing graduate students, based on the understanding that ISAS/JAXA acts as an inter-university research institute.

To fulfill these duties, the successful candidate needs to satisfy, at minimum, the following conditions:

- Have research records that are well-recognized worldwide in both the theoretical and experimental aspects of semiconductor engineering, and have the capability to lead the community based on her/his research experience;
- Have a vision as regards the future of semiconductor technologies for space applications; and
- Be capable of teaching and directing graduate students.

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

(8) Photocopies of major research papers (less than 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/forms1/1542248205>

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

Friday, February 1, 2019, 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 too 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 Spacecraft Engineering:

Prof. Takahiro Yamada

Tel: +81-50-3362-6115 E-mail: tyamada@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.

Personnel who transfers 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.