

# Niigata University ‘Swing-by’ Program for Fostering Young Faculty Members

## (Recruitment and Training Program for Young Faculty Members)

Call for applications for an Associate Professor or an Assistant Professor in Institute of Science and Technology (Carbon-neutral Technologies), Niigata University

Niigata University has established a unique ‘Swing-by’ program for fostering young Faculty Members, since 2020. This program provides generous support to newly appointed young Faculty Members who are active in various research fields not only in Japan but also globally. Through this program we hope to enhance the research activities of Niigata University to a higher level and leap forward to a bright future.

‘Swing-by’ Program is designed to foster newly recruited young researchers by training them at Niigata University and preparing them for a leap in their respective research fields, similar to artificial satellites and spacecrafts which attain momentum and change in flight paths in the space using the gravitational pull of the celestial bodies.

In this program, we will recruit young faculty across all disciplines in a single recruitment drive. They will be provided a conducive research environment, which helps them to carry out top level research in their field of specialization, as well as encourage interdisciplinary approach. We will also mentor them with technical support and startup research funds to assist in securing grants from competitive research funding agencies and industries.

This year, we plan to recruit and train about 15 young researchers in the following research areas. Initial screening will be conducted based on the applicant’s expertise in his/her specialization, followed by a second stage of screening from a broader perspective, which will be conducted by the University President and Executive board members. Selected researchers will be appointed to a Faculty in accordance with their field of expertise, concurrently in the Institute for Research Promotion. The Institute for Research Promotion will take a lead role in fostering and supporting them to take new challenges in teaching and research at Niigata University.

Niigata University is committed to enhancing the diversity and inclusion of its faculty, and encourage its female and foreign researchers to play an active role in university. We welcome proactive applications from a global perspective.

### Research Field for Recruitment

- Neuro-physiological psychology/Forensic and Criminal Psychology
- Public Administration in the Context of Natural Disaster
- Forest Conservation and Wildlife Management
- Carbon-neutral Technologies (Photovoltaics, Solar cells, Artificial photosynthesis, Water splitting, Photocatalysts, Solar thermal energy engineering)
- Inorganic · Analytical Chemistry and their related chemistry

- Algebra and Geometry (algebraic geometry, number theory, differential geometry, topology and related fields)
- Big Data/Informatics, Artificial Intelligence and related fields (Data Science, Information and Communication Technology, Biomedical Engineering, Human Informatics, Biomechanics, Measurement engineering)
- Plant Genetics and Breeding
- Ecological Dentistry
- Functional Regenerative Oral Medicine
- Research on Advanced Brain Pathology Analysis

Number of Positions

About 15

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As a part of this recruitment, we are recruiting faculty members in charge of the Carbon-neutral Technologies field.

### **1. Job type**

One Associate Professor or One Assistant Professor (Permanent Faculty Position)  
Appointed job type will be judged by experience and achievement of education, research, etc. of the applicant.

### **2. Expected date of joining**

As soon as possible after April 1, 2023

### **3. Affiliation**

Institute of Science and Technology

Selected candidate is required to carry out teaching and research in the Institute of Science and Technology, and, will be also appointed to work concurrently at Institute for Research Promotion. They also have to participate in the program of fostering young faculty for three to five years after being hired, which provides you with necessary support to help your research activity.

### **4. Job Description**

[Affiliation] Faculty of Engineering, and Graduate School of Science and Technology

[Job Description]

Education and research on one of the followings;

- (1) Materials, devices, modules and processes related to solar cells; Photovoltaic systems
- (2) Solar energy conversion materials, material transformation catalysts, and artificial photosynthesis systems
- (3) Thermal energy related materials and thermal energy processes/systems (thermal energy storage materials and systems, thermochemical catalysts and processes, thermal engineering, etc.)

Those (1)-(3) are main research topics in Interdisciplinary Research Center for Carbon-Neutral Technologies

(<https://www.niigata-u.ac.jp/contribution/research/information/researchdevelopment/>) established in April 1, 2022. International collaboration is strongly required for development of Faculty of Engineering as Center of Excellence toward early realization of carbon neutral based on research activities in Interdisciplinary Research Center for Carbon-Neutral Technologies.

[Research Field]

Research field is one of the followings;

- (1) Solar Cells and Photovoltaics: Solar cells (silicon, compound semiconductors, organic, perovskite, etc.) and related materials and processes, photovoltaic modules, photovoltaic systems
- (2) Solar Energy Conversion and Material Transformation: Solar energy conversion, artificial photosynthesis, water splitting, material transformation, photocatalysts, electrocatalysts
- (3) Solar Thermal Energy Engineering: Thermal storage materials, thermochemical catalyst, thermal energy systems, thermochemical process, thermal engineering

[Remark] In the case of Assistant Professor, he/she works as a member of research group.

## 5. Qualifications

- (1) As a general rule, those who have obtained his/her PhD degree in his/her field of research within the past 10 years (Including those who are expected to obtain his/her PhD degree by the date of appointment).
- (2) Those who are able to live in Niigata City or its suburbs, and carry out his/her duty after being hired.

## 6. Terms of Employment

- (1) Work Location: 8050 Ikarashi 2-no-cho, Nishi-ku, Niigata, Niigata, Japan
- (2) Salary: Annual salary system based on “Regulations for New Annual Salary System for Faculties of Niigata University,” and other benefits as per the University rules and regulations
- (3) Employment Type:
  - Employment time : Discretionary labor system will be applied (deemed working hours: 7 hours and 45 minutes a day)
  - Holidays : Saturdays, Sundays, national holidays, holidays around the end of the year and the beginning of the year, etc.
- (4) Health insurance: Provided by the Ministry of Education, Culture, Sports, Science and Technology Mutual Aid Association, Employment Insurance, Industrial Accident Compensation Insurance
- (5) Working environment: Provision of own personal office: about 20 m<sup>2</sup>

## 7. Support for nurturing young researchers

After appointment, you will be provided with the following support so that you can enhance your field of expertise and take on the challenge of developing new fields beyond the existing research fields.

- (1) Providing start-up research funds. (In addition to the annual research funds provided by respective Faculties).

- (2) Niigata University equipment sharing system
- (3) Training Program (support from university and URA, etc.).
  - Support for obtaining external funds such as ‘Kakenhi’
  - Participating regularly in cross-disciplinary exchange meetings
  - Participation in young researchers meetings
  - Attending training courses on educational policy and methods at the Niigata University
  - Giving lectures and presentations at places such as seminars.
  - Others such as attending training courses necessary for education and research activities

### **8. Application Documents (one copy each, A4 size, No specific format)**

- (1) A curriculum vitae with a photograph of the applicant’s face, including name, date of birth, gender, postal address, telephone number, e-mail address, details of doctoral degree, rewards/punishments, academic background, and professional career. Desired job type (Associate Professor/ Assistant Professor/ Both acceptable) should be shown as a remark in the curriculum vitae.
- (2) A list of academic publications: information on peer-reviewed journal papers (with SCI impact factors), books and book chapters, other publications (specify clearly whether peer-reviewed or not), patents, and list of international conference presentations (specify if it is an invited talk). Sort the publications from oldest to newest.
- (3) Reprints or copies of significant peer-reviewed journal papers (no more than 5 papers).
- (4) Summary of the research achievements and the future plan for research and education (within two A4 pages).
- (5) If the candidate has teaching experience, please provide a list of lecture names, levels, and time given. Also provide the number of students supervised for under-graduate and post-graduate thesis and their research topics.
- (6) If the candidate has experience for collaboration with industry, regional cooperation, or international collaboration, please provide a list of those collaborations.
- (7) A list of scientific research funds/grants awarded. Types of funding and funding agency names, research topics, specific roles (e.g., principal investigator or co-investigator), and periods of the funding are required.
- (8) A list of awards received. Name of the award, title, name of the awardee, and date of the award should be included in the list. Also a list of activities in academic societies. Special notes are also included.
- (9) Two reference persons to whom we may contact. A list of his/her name, affiliation, telephone number and e-mail address should be given.

\*You may be required to submit additional documents if necessary.

Applications can be submitted by post or via the JREC-IN Portal.

In case of sending by post, please put all the required documents and their electronic files in an envelope. Outside the envelope please specify clearly in red ink “Enclosed the application documents for ‘Swing-by’ program for Carbon-neutral Technologies”,

and send it to the address shown below in “10” by registered mail or courier service (in a way which allows you to confirm that your application has been received by us).

\*Application documents will not be returned, and handled with strict confidentiality. Your personal information obtained by Niigata University in the process of the recruitment will be properly handled based on “Act on the Protection of Personal Information Held by Independent Administrative Corporation, etc.”, and will not be used for any purpose other than the selection process.

## **9. Screening and Selection Schedule**

- (1) Application Deadline : Must arrive no later than 5:00 pm, September 26, 2022 (JST)
- (2) First screening : Late in September to early in November, 2022; Screening of documents and Interview of shortlisted candidates (Onsite/online interview might be conducted).
- (3) Notification of the result of the first selection: November, 2022
- (4) Schedule for final screening: Nov. ~Dec., 2022 Interview by University President and board members (Online interview might be conducted).
- (5) Notification of the result:  
Applicants will be notified of the result after the selection process is over.

\*All costs relating to the selection process such as travel expenses and accommodation fee must be borne by the applicant.

## **10. Contact Information:**

Applications should be submitted to:  
General Affairs Division, Institute of Science and Technology, Niigata University  
Address: 8050, Ikarashi 2-no-cho, Nishi-ku, Niigata 950-2181, Japan  
TEL: +81-25-262-6823  
FAX: +81-25-262-7940  
E-Mail: skei-shomu@adm.niigata-u.ac.jp

## **11. Inquiries regarding the content of the work:**

Contact by e-mail is strongly recommended.

Inquiry: Faculty of Engineering, Niigata University

(1) Solar Cells and Photovoltaics

Professor, Atsushi Masuda

TEL: +81-25-262-7381

FAX: +81-25-262-7287

E-Mail: a-masuda@eng.niigata-u.ac.jp

(2) Solar Energy Conversion and Material Transformation

Professor, Masayuki Yagi

TEL: +81-25-262-6790

FAX: +81-25-262-6790  
E-Mail: yagi@eng.niigata-u.ac.jp

(3) Solar Thermal Energy Engineering  
Professor, Tatsuya Kodama  
TEL: +81-25-262-7335  
FAX: +81-25-262-7335  
E-Mail: tkodama@eng.niigata-u.ac.jp

## **12. Others**

\*Niigata University has set up the “Office for Equality and Diversity” in our campus, and is firmly committed to gender balance and supporting physically handicapped researchers (<http://www.niigata-u.ac.jp/geo/>).

\*Niigata University is promoting hiring of faculty members who have a flexible attitude in today’s global society and to realize the globalization of our campus. We welcome applications from foreigners who can communicate with researchers and students in English. Japanese communication skill will be an added advantage, but not an essential condition for the application.