

May 2, 2024

Recruitment for Associate Professor Position

Institute of Fluid Science (IFS), Tohoku University invites applications for an Associate Professor position. Preference will be given to highly motivated candidates, with an outstanding academic background.

Kaoru Maruta
Director

Institute of Fluid Science, Tohoku University

1. Division, Laboratory, Number of Positions and Job Title

Division	Laboratory	Number of Positions and Job Title
Creative Flow Research Division	Aerospace Fluid Engineering Laboratory	One position open for Associate Professor

2. Job Description

We promote research and education on the development of new fluid analysis techniques based on computational fluid dynamics technology using molecular dynamics, electrohydrodynamics, and multiphase fluid dynamics and apply them to elucidate fluid phenomena around moving objects with a wide range of speeds from automobiles to space vehicle, and to conduct the advancement of the industrial fluid machinery.

3. Required Qualifications and Conditions

Candidates must have a doctoral degree upon arrival at the post and a distinguished achievement in the above-mentioned specialized field.

4. Starting Date

October 1, 2024

(Term: Ten years without extension)

5. Application Deadline

Application documents must arrive by Friday, August 2, 2024, at 17:00 (JST).

6. Requested Documents

I. Curriculum Vitae

Please be sure to include your current postal address and e-mail address.

II. List of research accomplishments*

- 1: Peer-reviewed journal papers (Specify the latest impact factor of the journals, as much as possible.)
- 2: Review papers (same as above)
- 3: Peer-reviewed full-length proceedings
- 4: Books, chapters
- 5: Invited lectures (international and domestic conferences) (only the lectures presented by the applicant)
- 6: Presentations at international conferences other than invited lectures (Indicate the presenter.)
- 7: Experience in organizing international/domestic conferences
- 8: Patent applications/registrations
- 9: Background in international/domestic research collaboration, and achievements of overseas research activities
- 10: Awards received
- 11: Competitive research funding obtained
- 12: Other

* All the above documents should be prepared on separate sheets. All the names of co-authors for No. 1-No. 6 in II above and all the names of joint inventors for No. 8 in II above should be specified, and the name of the applicant underlined. Also, the roles of the applicant for No.1-No. 8 in II above should be mentioned. The number of citations for No.1-No. 6 in II above should be written and should indicate the source of the number of citations.

III. Offprints of 5 papers of research achievements from No.1-No. 4 in II above. (Electronic files are acceptable.)

IV. Outline of your research achievements selected in III above (should be around 300 words each).

V. Statement describing the applicant's future research and education plan at IFS. (Please include past educational experiences in subjects related to mechanical engineering and describe them in concrete terms.)

VI. Contact information of reference(s): name, name of institution, position title, postal address, telephone number and email address. (about 3 people.)

Documents should be prepared in A4 format. Put all the files into USB drive or equivalent and send it by the registered mail if postal service is used.

Submission by the transfer service and email attachment is also acceptable. Indicate “Application for Associate Professor of Aerospace Fluid Engineering Laboratory” in the subject of email. An acknowledgment of receipt of the will be sent to the applicant. If the applicant does not receive within 48 hours from submission, contact again.

The applicant may be requested to provide additional documents during the screening process. An online interview may be conducted.

7. Contact

Director Kaoru Maruta

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For more information on the Institute of Fluid Science, please visit:

<https://www.ifs.tohoku.ac.jp/>

Expected research areas and additional information

Creative Flow Research Division aims for the creation of new functions under flow dynamics of the physical properties of fluids and the flow system, aspiring to science and technology innovation and application. Through the clarification of our understanding of the flow in electromagnetic fluid, biological flow dynamics, and aerospace, we contribute to the development of this academic field and to the establishment of innovative engineering technology. Also, as cooperative courses of the Mechanical Engineering course of the Graduate School of Engineering, Department of Mechanical and Aerospace Engineering of the School of Engineering at Tohoku University, faculty members are in charge of lectures related to mechanical engineering.

Through this recruitment, we are planning to promote the following research.

Division (Laboratory)	Research Contents
Creative Flow Research Division* (Aerospace Fluid Engineering Laboratory)	<p>We promote research and education on the development of new fluid analysis techniques based on computational fluid dynamics (CFD) technology using molecular dynamics, electrohydrodynamics, and multiphase fluid dynamics for aerospace-related fluid phenomena, the elucidation of fluid phenomena around moving objects with a wide range of speeds from automobiles to space planes, and on applications related to industrial machinery.</p> <ol style="list-style-type: none"><li data-bbox="598 1290 1436 1361">1. Innovative research for green transformation of aircraft<li data-bbox="598 1406 1436 1518">2. Research on boundary layer control technology using roughness and characteristics of the object surfaces as control factors<li data-bbox="598 1563 1436 1675">3. Research on digital twin technology that combines CFD technology, data science, and wind tunnel experiments

* Creative Flow Research Division consists of seven laboratories: Electromagnetic Functional Flow Dynamics Laboratory, Intelligent Fluid Control Systems Laboratory, Integrated Simulation Biomedical Engineering Laboratory, Biomedical Flow Dynamics Laboratory, Aerospace Fluid Engineering Laboratory, Spacecraft Thermal and Fluids Systems Laboratory, and Design of Structure and Flow in the Earth Laboratory.

Diversity, Equity and Inclusion (DEI)

- Tohoku University promotes activities to increase Diversity, Equity and Inclusion (DEI) and encourages people of varied talents from all backgrounds to apply for positions at the university.

Tohoku University's website about the DEI Declaration is here:

<http://tumug.tohoku.ac.jp/dei/>

- Pursuant to Article 8 of the Act on Securing, Etc. of Equal Opportunity and Treatment between Men and Women in Employment, Tohoku University shall, as a measure for increasing the presence of women among the academic staff, prioritize the hiring of women deemed qualified for each job opening, based on impartial evaluation.
- Tohoku University has published 'Tohoku University - Live as Who You Are - Guidelines for Gender and Sexual Diversity' to provide explanations and details of how those at the university should respond with respect to diverse sexuality. The purpose of the guidelines is to create an environment in which all students, faculty, and staff respect diverse sexuality in their academic, research, and professional activities.

Please see the Center for Diversity, Equity, and Inclusion, Tohoku University website:

http://tumug.tohoku.ac.jp/tu_guideline_rev2-2/

- Tohoku University has the largest on-campus childcare system of all Japanese national universities. This network comprises three nurseries: Kawauchi Keyaki Nursery school (capacity: 22) and Aobayama Midori Nursery school (116), both open to all university employees, as well as Hoshinoko Nursery school (120), which is open to employees working at Tohoku University Hospital. In addition, Tohoku University Hospital runs a childcare room for mildly ill and convalescent children which is available to all university employees.
- See the following website for information on these and other programs that Tohoku University runs to assist work-life balance, to support researchers, and to advance gender equality, including measures to promote childcare leave among male employees.

Center for Diversity, Equity, and Inclusion, Tohoku University website:

<http://www.tumug.tohoku.ac.jp/>

Human Resources and Planning Department website:

<https://c.bureau.tohoku.ac.jp/jinji-top/external/a-4-kosodate/>

Notice

This recruitment is an English translation of the Japanese version. The content of the recruitment is based on the Japanese version.