

August 27, 2024

### Recruitment for Professor Position

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

Kaoru Maruta  
Director  
IFS, Tohoku University

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

Division	Laboratory	Number of Positions and Job Title
Creative Flow Research Division	Integrated Simulation Biomedical Engineering Laboratory	One position, tenured full Professor

#### 2. Job Description

We promote research and education based on the Integrated Flow Science to elucidate cell behavior, maintaining the homeostasis, and the mechanisms of onset as well as progression of disease by reproducing in-vivo environment, and also to develop innovative diagnosis and therapeutic technologies.

#### 3. Required Qualifications and Conditions

Candidates must have a doctoral degree and a distinguished achievement in the above-mentioned field of specialization. (See the notation of DEI attached)

#### 4. Starting Date of employment

April 1, 2025

(Permanent employment [Retirement age depends on the rules and regulations of Tohoku University.] )

#### 5. Application Deadline

Application documents must arrive by noon, Friday, November 22, 2024 (JST).

## 6. Requested Documents

### I. Curriculum Vitae

Postal address and email address should be included.

### II. List of research accomplishments\*

- 1: Peer-reviewed journal papers (Specify the latest impact factor of the journals.)
- 2: Review papers (Specify the latest impact factor of the journals.)
- 3: Peer-reviewed full-length proceedings papers
- 4: Books, chapters
- 5: Invited lectures (only lectures presented by the applicant)
- 6: Presentations at international conferences other than Item 5
- 7: Experience in organizing conferences
- 8: Patent applications/registrations
- 9: Background and achievements in international research collaboration
- 10: Awards and honors
- 11: Research fundings
- 12: Others if applicable

\* Lists should include twelve items shown above. All the coauthors for Items 1 through 6 and 8 in II should be specified. Underline the applicant for Items 1 through 6, and 8. In addition, the roles of the applicant for Items 1 through 8 in II should be described. Total number of citations and h-index should be indicated with the source of them. Summarize Items 1 through 12 in a single PDF file.

### III. Electronic files in PDF format of five selected papers.

### IV. Summaries of the five selected papers around 300 words each.

### V. Future research and education plan at IFS. Include educational experiences in subjects related to mechanical engineering.

### VI. Contact information of reference(s) up to three persons: name, affiliation, title, postal address, phone number and email address.

Documents should be prepared in A4 format. Put all the files into USB flash drive or equivalent and send it by the registered mail if postal service is used. Submission by file transfer service or email attachment is also acceptable.

Indicate “Application for Professor Position of Integrated Simulation Biomedical Engineering Laboratory” in the subject of email. An acknowledgment of receipt will be sent to the applicant. If the applicant does not receive it 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

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For more information on the Institute of Fluid Science, 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 Division of Mechanical Engineering of the Graduate School at Tohoku University and 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	Research contents
Creative Flow Research Division* (Integrated Simulation Biomedical Engineering Laboratory)	<p>We promote research and education based on the Integrated Flow Science to elucidate cell behavior, maintaining the homeostasis, and the mechanisms of onset as well as progression of disease by reproducing in-vivo environment, and also to develop innovative diagnosis and therapeutic technologies.</p> <ol style="list-style-type: none"><li>1. Integrated research using multiple methods such as in-vivo and/or in-vitro experiments and numerical analysis</li><li>2. Research on maintenance of homeostasis and mechanisms of disease progression</li><li>3. Development of advanced technologies for in-vivo diagnosis</li></ol>

\* 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.

## Notice

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

## 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:  
<https://dei.tohoku.ac.jp/vision/about/>
- 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 Tohoku University Center for Gender Equality Promotion website:  
[https://dei.tohoku.ac.jp/wp-content/uploads/2023/10/EN\\_GuideLine.pdf](https://dei.tohoku.ac.jp/wp-content/uploads/2023/10/EN_GuideLine.pdf)
- 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:  
[https://dei.tohoku.ac.jp/vision/consulting/for\\_family/](https://dei.tohoku.ac.jp/vision/consulting/for_family/)

Human Resources and Planning Department website:  
<https://c.bureau.tohoku.ac.jp/jinji-top/external/a-4-kosodate/>