

**Position for Postdoctoral Fellow in the Laboratory of Pattern Recognition and Machine Learning  
Faculty of Information Science and Technology, Hokkaido University**

Nov. 26, 2024

We are inviting applications for the position of Postdoctoral Fellow in the Laboratory of Pattern Recognition and Machine Learning, Research Group of Mathematical Science, Division of Computer Science and Information Technology, Faculty of Information Science and Technology, Hokkaido University.

Name of Recruiting Institution: Hokkaido University

Title of position: Postdoctoral Fellow

Affiliation: (Just after hiring) Laboratory of Pattern Recognition and Machine Learning, Research Group of Mathematical Science, Division of Computer Science and Information Technology, Faculty of Information Science and Technology, Hokkaido University.  
(Scope of change) No change expected.

**Research Fields and Duties**

(Just after hiring) By integrating numerical analysis and differential geometry into deep learning, we are developing artificial intelligence methods techniques that balance achieve high modeling accuracy with reliability and interpretability. This position is part of the JST CREST project ("Prediction Mathematical Foundation" area), "Operator Learning via Synergy of Geometric Classical Field Theory and Infinite-Dimensional Data Science" (PI: Professor Takaharu Taniguchi, Kobe University). The successful candidate will engage in research on topics such as:

Hamiltonian neural networks  
Physics-informed neural networks  
Neural operators  
Structure preserving deep learning

Even candidates without direct research experience in these topics are encouraged to apply if they have a research background in one of the following fields and are motivated to integrate their expertise with deep learning:

Numerical analysis  
Geometric mechanics  
Structure-preserving numerical integrator  
Theory of partial differential equations

(Scope of change) No change expected.

**Duties in education:**

No classes. Co-supervising master's and PhD students.

**Qualifications:**

- (1) Have or expect to obtain a doctoral degree or Ph.D.
- (2) Have a publication record in the related fields.
- (3) Be capable of conducting research activities in either Japanese or English.

Application materials:

- (1) CV with recent photo, contact details (address, phone, and e-mail), academic record, and job experience;

Remark:

- Applicants who have been employed by Hokkaido University from April 1, 2013 (any position, including Part-Time Lecture, TA, TF, RA, Short-term Support Assistant, etc.) should provide full details of your employment history.
- (2) List of publications
  - (3) Copies of up to 3 selected publications.
  - (4) Research statements.
  - (5) Two references for the applicant, with their name, institution, position, and e-mail address.

Remark:

- Please note that an interview may be conducted if necessary. In that event, the applicant is responsible for any travel expenses.

Deadline for application: **March 31, 2024, 24:00 (JST)** ※Close as soon as it is decided

Scheduled starting date of employment: **April 1, 2025, or later**

How to submit the above application documents (WEB Application Only):

Please submit the application documents by making a single ZIP file and uploading through the JREC-IN portal.

The ZIP file should contain PDF files of (1) – (5) and be named “Your Name.zip”.

Contact person:

Prof. Takashi Matsubara, PhD

Professor of Faculty of Computer Science and Information Technology

E-mail: matsubara@ist.hokudai.ac.jp

Employment status:

Full-time (non-tenured)

Until March 31, 2026 (Renewable every fiscal year, with the possibility of extension up to March 31, 2030).

Compensation:

- (1) Probation Period:  
1 month.
- (2) Working hours, etc.:  
Monday to Friday  
Discretionary labor system\* for professional work based on the employee’s agreement or  
Fixed working hours system  
\* The working hours for a day are deemed as 7 hours and 45 minutes.
- (3) Salary:  
5,520,000 JPY (Annual salary). See for Employment Regulations for Contract Employees of Hokkaido University.
- (4) Health insurance, etc.
  - Employee pension insurance
  - Mutual Association of the Ministry of Education, Culture, Sports, Science and Technology
  - Employment Insurance
  - Workers' accident compensation insurance
- (5) Measures to Prevent Second-hand Smoke  
Smoking in designated areas only

## Appendix

1. At Hokkaido University, we are actively promoting both education and research activities while relying on diverse human resources and gender equality. Therefore, we explicitly invite women qualified in the research field to apply. We are also actively supporting a satisfying work-life balance and are thus creating ideal environments for people to reach their full potential.
2. Please refer to the following URL for the current members of this division:  
[https://www.ist.hokudai.ac.jp/eng/staff/index\\_faculty\\_division.html](https://www.ist.hokudai.ac.jp/eng/staff/index_faculty_division.html)