

# **Chiba University Seeking a Specially Appointed Researcher at the Center for Environmental Remote Sensing**

December 6, 2023

Environmental Prediction Science Laboratory

Center for Environmental Remote Sensing (CEReS), Chiba University

[\(https://kotsuki-lab.com/\)](https://kotsuki-lab.com/)

## **[Job Description]**

The Center for Environmental Remote Sensing Research Center (CEReS), Chiba University, processes, archives, and publishes satellite data and related ground observation data, and is exploring a wide range of research fields on Earth Environmental Science. At this time, we are recruiting a specially-appointed researcher to implement educational research on weather controllability through ensemble data assimilation and data-driven approaches.

### **1. Number of Applicants: 1 or 2**

### **2. Position Summary:**

The successful candidate will be able to contribute to education and research on weather controllability through ensemble data assimilation and data-driven approaches. Doctoral degree at the time of hire or expected to obtain a doctoral degree in the near future.

### **3. Job Description:**

Engage in education and research such as JST-Moon Shot Research 8 "Artificial generation of upstream maritime heavy rains to govern intense-rain-induced disasters over land" and develop data science technologies to realize weather control. Specifically, the following research-related tasks are considered, but the applicant's research background and technology may also be taken into consideration in setting research themes that can contribute to the project mission.

- (1) Research on the development of weather control system that combines ensemble data assimilation and nonlinear system control methods
- (2) Research of acceleration of data assimilation and control methods using quantum annealing machines
- (3) Research on reducing dimensions of ensemble weather forecasts using data-driven approaches (e.g. machine learning, neural networks, reservoir computing, and

Koopman mode decomposition) and their applications to weather control

If you would like to know more about our research further, please contact Prof. Shunji Kotsuki below.

### **[Qualifications]**

Those who are interested in research fields related to meteorological/hydrological models, data assimilation, machine learning, and data science, and have research achievements in related fields. Applicants from fields other than earth science are also welcome (e.g., mathematics, information science, ecology, etc.) if you have an interest or motivation for such fields mentioned at the beginning.

### **[Related Research Fields]**

Geoscience (Earth Science) including hydrology and meteorology, civil engineering, general environmental science, mathematics, and information science.

#### **4. Hire Date: March-May 2024 \*\*negotiable**

#### **5. Recruitment Period:**

The contract is until the end of the Japanese school year, but it may be renewed depending on the progress of the work.

#### **6. Employee Benefits:**

- (1) Job title:** Specially-appointed researcher (full-time).
- (2) Salary, etc.:** University's Specified Employment Staff Salary Regulations based on your years of experience will be applied
- (3) Working hours:** from 8:30 to 17:15, 5 days a week, 7 hours and 45 minutes per day (under the Discretionary Labor System for Professional Work).
- (4) Holidays:** Saturdays, Sundays, National holidays, and year-end and New Year holidays.
- (5) Leave:** granted based on the University's employment agreement.
- (6) Various allowances:** provide commuting allowance if requirements are met based on the regulations.
- (7) Insurance:** join a mutual aid association, employment insurance, and workers' accident compensation insurance

#### **7. Selection Process:** will be made based on application screening and interviews.

## 8. Required documents:

- (1) Complete CV: any style or format is accepted. \*Email address is required.
- (2) List of research achievements: please list peer-reviewed treatises and others separately.
- (3) Copy of 3 major publications: must be single author or first author treatise.
- (4) Research history and plan after being hired: please fill out two letter-size papers for each topic including your available programming languages.
- (5) Contact information of your former co-workers: list 1 or 2 people other than the Center for Environmental Remote Sensing, Chiba University. Any style or format is accepted.

## 9. Deadline for this recruitment:

Applications (required documents listed #8) must arrive by January 10, 2023. Please note that the deadline may change accordingly.

## 10. Documents to be sent to:

Shunji Kotsuki  
Environmental Remote Sensing Research Center, Chiba University  
1-33 Yayoi-cho, Inage-ku, Chiba-city, Chiba, Japan 263-8522

- ✚ Note "**Specially Appointed Researcher Application Documents Enclosed**" in red on the front of the envelop if sent by registered mail.

## 11. Contacts:

### ✚ Job related:

Shunji Kotsuki  
Environmental Remote Sensing Research Center, Chiba University  
Phone: 043-290-3861, e-mail: [shunji.kotsuki@chiba-u.jp](mailto:shunji.kotsuki@chiba-u.jp)

### ✚ Benefits related:

Noriko Sase  
Center Support Unit., Science and Engineering General Affairs Division, Nishi-Chiba District, Chiba University  
Phone: 043-290-2024, e-mail: [bee3832@office.chiba-u.jp](mailto:bee3832@office.chiba-u.jp)

## 12. Notes:

- ✚ Application documents will not be used for any other purposes than the selection process. These documents will not be returned unless a stamped self-addressed envelope is enclosed.
- ✚ Travel expenses will not be paid for interviews during the selection process.

✚ The salary will be determined in accordance with our university's specific employment salary regulations, based on years of experience. For the first year after obtaining a Ph.D. degree, the annual income is expected to be around 5 million yen.