

### **Program-Specific Researcher Position (Postdoctoral Fellow) at Kyoto University**

We are seeking a postdoc researcher who collaborates with us on the project "CyPhAI: Formal Analysis and Design of AI-intensive Cyber-Physical Systems" funded by JST. This project aims to establish mathematically-solid methodologies to model, verify, test, monitor, and control a cyber-physical system in which AI plays a crucial role (AI-CPS). A successful candidate will work with Kohei Suenaga (Kyoto University, Kyoto, Japan). The contract will initially run until the end of March 2024, with the possibility of annual renewal at maximum until March 31st, 2026.

The main research topic will be machine learning for AI-CPS and verification of AI-CPS. The expected research topic includes (but is not limited to) the following:

- Application of machine learning to synthesize the design of AI-CPS.
- Efficient machine learning for AI components in AI-CPS.
- Model checking for AI-CPS.

**Job title:** Program-Specific Researcher (Postdoctoral Fellow)

**Number of positions:** 1

**Job description:** You will pursue your research agenda in line with the project's goal of applying formal methods to manufacturing. You need a Ph.D. degree (or to be close to completion) and a proven publication record. The experience of active interdisciplinary collaboration is highly desirable. The annual gross salary is determined according to the rules of Kyoto University based on your qualifications. Insurances are covered according to the rules of the hiring institutions.

**Required qualification:** A successful candidate must meet the following qualification.

- He/She must have a Ph.D. degree or must be very close to its completion.
- He/She must be (self-)motivated, dedicated, open-minded, and able to work independently and collaboratively.
- He/She must have strong communication skills in oral/written English due to our project's international and interdisciplinary nature.
- He/She must have expertise in one or more of the following:
  - formal verification and/or testing of software and/or hybrid systems
  - verification and/or testing of machine-learning systems
  - solid skills in implementing and evaluating research prototypes

**Starting date:** As early as possible after the employment is admitted by Kyoto University.

**Contract term:** 1 year, with the possibility of extension until March 31st, 2024. We may consider a longer-period contract depending on the performance of applicants.

**Probation period:** 6 months

**Working conditions:** Working hours: 38 hours 45 minutes per week under a flexible-hours system.

**Salary and benefits:** To be determined per the existing employment regulations of Kyoto University.

**Social insurance:** Eligible for MEXT\* mutual aid association membership, employees' pensions, employment insurance, and workers' compensation insurance. \*Ministry of Education, Culture, Sports, Science and Technology of Japan

**Application and inquiry:**

Applications should be sent via email to application-cyphai [at] fos.kuis.kyoto-u.ac.jp, with the subject "CREST Job Application". Please include

- your brief CV,
- description of research interests,
- the list of papers (a dblp or Google scholar link will do, for example),
- a couple of representative papers (in pdf), and
- (preferably) the contact of two references.

**Application deadline:** Open until the position is filled.

We will contact you for additional material and an interview provided that we find sufficient relevance in your application. Starting dates are flexible. The positions will remain open until filled. The project ends in March 2026.

Inquiries should also be sent via email to application-cyphai [at] fos.kuis.kyoto-u.ac.jp with the subject "CREST Job Inquiry".

**Others:**

We will not use personal information provided in an application for any other purpose than screening for employment. At Kyoto University, smoking indoors is prohibited, and smoking outdoors is prohibited except for designated smoking areas to prevent secondhand smoke.