

## Postdoctoral fellow for the T2K experiment at J-PARC

Title	Researcher
Number of Job Opening	A few people
Term	Initially for one year. Extendable until the end of March 2027 with mutual agreement
Start of the term	Negotiable, but prefer as early as possible after acceptance
Appl. Deadline	The deadline (to reach KEK) is at noon on Monday December 26, 2022(JST)

### Job description:

CP violation in the neutrino sector, which can be measured by long-baseline neutrino oscillation experiments, is important for elucidating the mystery of the matter-antimatter asymmetry in the universe. We are calling for applications for a few postdoctoral fellows to work on the Tokai-to-Kamioka long-baseline neutrino oscillation experiment (T2K). T2K found an indication of CP violation in neutrinos by analyzing the T2K data taken until 2019. We are now proceeding with an upgrade of the near neutrino detectors and preparation of a beam test experiment to improve Super-K systematic uncertainties, in parallel with an upgrade to the J-PARC Main Ring accelerator. We will resume T2K data-taking soon, and plan to double the T2K data statistics over the next few years. The successful applicant(s) will be able to play a central role in the search for CP violation as a member of the T2K collaboration.

The successful applicant(s) will work closely with a member of the T2K collaboration. The appointment will be made with one of the following institutes

- (1) Faculty of Science, Tohoku University
- (2) Institute of Particle and Nuclear Studies (IPNS), KEK
- (3) School of Science, Tokyo Institute of Technology

In the case of (1) or (2), the successful applicant(s) will work on the upgrade of the near neutrino detector (detector construction, commissioning and data analysis) and neutrino oscillation physics analysis. In the case of (3), the successful applicant(s) will work on a beam test experiment for a water Cherenkov detector with multi-PMTs at CERN and physics analysis, to improve the systematic uncertainties of the Super-K detector.

In the case of Tohoku University and Tokyo Institute of Technology, there is a possibility of promotion to project assistant professor after a prescribed screening process.

### Qualification:

Applicants are expected to have Ph.D. in experimental particle physics or other related fields by the time of the appointment.

### Method of Selection:

After reviewing the submitted application documents (see below), applicants may be called for an interview. The date of the interview will be communicated to the applicants who will be interviewed.

### Salary:

Salary, insurance, etc. shall be in accordance with the regulations of each institute.

### Application instructions:

Interested candidates should prepare the following documents:

1. Curriculum vitae (Use the designated form of KEK which can be found at <https://www.kek.jp/en/cv-e/>)  
\* CV should include your e-mail address, and your date of birth in addition to standard information of CV.
2. List of relevant publications
3. Brief description of research
4. Research plan
5. Starting date
6. Preferred affiliation and its rank (multiple choices possible)
7. Two letters of recommendation

The above documents should be prepared in pdf format with A4 size (29.5 cm x 21 cm).

### How to submit application documents:

- Please submit application documents using our Web system.
- Since we will issue you your own password, please send an e-mail to [kensh@post.kek.jp](mailto:kensh@post.kek.jp). (Please write “[KEK T2K PD Application]” in the email subject and write your name, current position and phone number in the body of the email.)
- We accept only PDF files.
- If you cannot use our web system, please contact us by e-mail. We cannot accept submissions by e-mail with attached application documents.

### Contact:

[General, Application Reception]  
Ken Sakashita  
Institute of Particle and Nuclear Studies, KEK,  
1-1 Oho, Tsukuba, Ibaraki, 305-0801 Japan  
E-mail : [kensh@post.kek.jp](mailto:kensh@post.kek.jp)

[Each institution]

- (1) Faculty of Science, Tohoku University : Atsuko K. Ichikawa  
(e-mail : [atsuko.ichikawa.c6@tohoku.ac.jp](mailto:atsuko.ichikawa.c6@tohoku.ac.jp))
- (2) IPNS, KEK : Ken Sakashita (e-mail : [kensh@post.kek.jp](mailto:kensh@post.kek.jp))
- (3) School of Science, Tokyo Institute of Technology : Masahiro Kuze  
(e-mail : [kuze@phys.titech.ac.jp](mailto:kuze@phys.titech.ac.jp))

### Note:

Tohoku University is promoting gender equality. For more information, please refer to this web page (<http://tumung.tohoku.ac.jp>).

KEK is promoting gender equality in accordance with the intent of “Basic Act for Gender Equal Society”. For more information, please refer to this web page (<http://www2.kek.jp/geo/>).

Tokyo Institute of Technology, in order to ensure a diverse workforce, guarantees equal opportunities for all individuals regardless of nationality or gender. Smoking is prohibited on campus (excluding designated outdoor smoking areas).