

# **Tohoku University NEXUS Postdoctoral Research Fellow Program**

## **Application Guidelines**

### **Position**

Postdoctoral Research Fellow (NEXUS Postdoctoral Fellowship Program)

### **Affiliation**

Quantum Lab, Frontier Research Institute for Interdisciplinary Sciences (FRIS), Tohoku University, Japan

### **Job Description**

- Conduct cutting-edge research in one or more of the following fields:
  - Quantum Computing (including near-term quantum algorithms and fault-tolerant models)
  - Foundational Quantum Physics (e.g., nonlocality, quantum-classical boundaries)
  - Quantum Metrology and Sensing (utilizing squeezing and entanglement)
  - Quantum Algorithms for High-Energy Physics (e.g., strong CP problem, gauge theory simulation)
- Collaborate with interdisciplinary teams.
- Participate in scientific dissemination, including mentoring students and presenting research at conferences.

### **Eligibility Requirements**

- Ph.D. in Physics, Quantum Information Science, Computer Science, or a related field by the start date.
- Demonstrated expertise in one or more of the research areas listed above.
- Strong academic record and publication achievements.
- High motivation for independent research and international collaboration.
- Proficiency in English.

### **Start of Employment**

October 1, 2025 or later.

### **Employment Status**

- Full-time postdoctoral fellow (non-tenured)

- Initial contract for up to 3 years, with a possible extension to 5 years based on performance and project alignment.

## Application Deadline

**July 25, 2025 (Friday), 17:00 anywhere on Earth**

## Selection Schedule

- **Interview notification:** Early August 2025
- **Final result:** Mid-August 2025

## Working Conditions and Benefits


- Annual salary and research support up to **7.3 million JPY** (6.3 million for salary and 1 million for research), including relocation support.
- Access to computational and experimental resources at Tohoku University.
- Full integration into the international research network under the NEXUS Fellowship framework.

## Required Documents

1. Cover Letter
2. Curriculum Vitae (including contact information for at least two references)
3. List of Publications
4. Research Statement (past achievements and future plans, max 2 pages)
5. Ph.D. Certificate or an official letter of expected graduation
6. Contact information of two **References** (*spelling corrected*)

**All documents must be in English and submitted via email.**

## Submission Guidelines

- **By Email:**
  - Combine all documents into a single ZIP file.
  - Use the email subject:  
**“Application for Postdoctoral Position – Quantum Lab (NEXUS Fellowship)”**
  - Send to:  
 [binho@fris.tohoku.ac.jp](mailto:binho@fris.tohoku.ac.jp)

## Contact Information

For inquiries related to the position or application process:

Quantum Lab, FRIS, Tohoku University

 [binho@fris.tohoku.ac.jp](mailto:binho@fris.tohoku.ac.jp)

 <https://quantumlab.onrender.com/>