



**Okinawa Institute of Science and Technology**  
**Postdoctoral Scholar/Quantum Dynamics Unit**

The Okinawa Institute of Science and Technology Graduate University (OIST; see [www.oist.jp](http://www.oist.jp)) is a dynamic new graduate university of science and technology in Okinawa Prefecture, Japan. The university is located on 85 hectares of protected forestland overlooking beautiful shoreline and coral reefs. The campus is striking architecturally, and the facilities are outstanding ([OIST campus video tour](#)). There are no academic departments, which facilitates multidisciplinary research. Outstanding resources and equipment are provided and managed to encourage easy access and collaboration. English is the official language of the University, and the university research community is fully international, with more than 50 countries represented. OIST is rapidly gaining recognition in the worldwide academic community as a model for excellence in education and research.

**Working Location:**

1919-1 Tancha, Onna-son, Okinawa, Japan 904-0495

**Report To:**

Prof. Denis Konstantinov, Quantum Dynamics Unit

**Responsibilities:**

The Quantum Dynamics Unit at OIST seeks to recruit motivated researches (postdocs, staff scientists, technicians/engineers) to work in the fields of experimental condensed matter and low temperature physics. Vacant positions are available starting from year 2022, in particular to work on one of the following research topics

**1. Detection and manipulation of single electron on liquid helium in fabricated microstructures**

Brief description: We develop ultra-sensitive image-charge detection of the Rydberg-state excitations of a few to a single electron confined in microchannel devices fabricated in our clean-room facilities. This work is motivated by its potential use for spin-state detection and spin qubits.

**2. Cavity QED experiments with electron ensembles on liquid helium.**

Brief description: We develop high-Q microwave Fabry-Perot resonators and microwave detection methods and use them to study the coupling of electron ensembles on liquid helium to light and related phenomena. One of potential applications is development of the electron-spin resonance methods for electrons on helium.



Other areas of research pursued in our unit are possible. For details, see

<https://groups.oist.jp/qdu/research>

**Qualifications:**

PhD in Physics and/or relevant experience in experimental low temperature physics and electrical engineering. English is the working language of our university.

**Starting Date:**

Starting date is negotiable but as soon as possible in 2022.

**Term & Working hours:**

Term: Full-time, the position is initially for two years and can be extended to one more year. Continuing position for staff scientists and technicians/engineers can be considered after three years.

Working hours: 9:00-17:30 (Discretionary)

**Compensation & Benefits:**

Compensation in accordance with the OIST Employee Compensation Regulations

Benefits:

- Relocation, housing and commuting allowances
- Annual paid leave and summer holidays
- Health insurance (Private School Mutual Aid <http://www.shigakukyosai.jp/>)
- Welfare pension insurance (kousei-nenkin)
- Worker's accident compensation insurance (roudousha-saigai-hoshou-hoken)

**How to Apply:**

Apply by emailing your Submission Documents to:

denis[at]oist.jp

(Please replace [at] with @ before using this email address)

We will contact you by email if your skills and research experience match the job profile.

**Submission Documents:**

- Curriculum vitae in English
- Brief description of previous research and achievements (not exceeding 2 pages)



- Names and contact information of at least 2 potential reference writers

\* Prior to the start of employment all new hires are required to successfully complete a background check. Personal information including employment history and academic background should be submitted to third-party administrators after a conditional offer of employment.

**Application Due Date:**

Applications deadline will continue until the positions are filled.

**Declaration:**

- ✧ OIST Graduate University is an equal opportunity, affirmative action educator and employer and is committed to increasing the diversity of its faculty, students and staff. The University strongly encourages applications from underrepresented groups.
- ✧ Information provided by applicants or references will be kept confidential, documents will not be returned. All applicants will be notified regarding the status of their applications.  
[OIST Privacy Policy](#)
- ✧ Please view our policy for rules on external professional activities  
(<https://groups.oist.jp/acd/information-disclosure/>).
- ✧ Further details about the University can be viewed on our website (<https://www.oist.jp>).