



**Okinawa Institute of Science and Technology**  
**2 Postdoc positions in Qubits and Spacetime 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.

**Position summary:**

Two 3-year postdoc positions will become available in the new Qubits and Spacetime Unit led by Philipp Hoehn in Fall 2020. This unit will be established in the first half of 2020 and its research will lie broadly at the interface of quantum gravity, quantum information and foundations, focusing on general questions in an around quantum gravity. Current research interests include studying dynamics and observables in a diffeomorphism-invariant context, using quantum reference frames/systems to explore a quantum version of general covariance, the interplay of quantum correlations and spacetime geometry, entanglement in gauge systems, as well as the emergence of classicality from within quantum theory, especially in the presence of chaos. Candidates with an interest in any of these or related topics are encouraged to apply. The unit is expected to grow further in the coming years.

OIST currently harbors three further units in quantum gravity or related topics in mathematical physics, headed by Shinobu Hikami, Yasha Neiman and Reiko Toriumi. Furthermore, the institute regularly hosts international workshops, seminars and visitors in this area, providing for a stimulating research environment. The unit will provide support for traveling and hosting collaborators.

**Responsibilities:**

The successful candidate will contribute to the research program of the Qubits and Spacetime Unit, but is also encouraged to carry out self-designed projects. Active participation in group seminars and meetings is expected, as well as in assisting with their organization. The successful candidate may also contribute to mentoring students.



**Qualifications:**

1. Completed PhD in theoretical physics or mathematics by the time of employment.
2. Background in one or several of the following topics: quantum gravity, quantum information, quantum field theory, quantum foundations, quantum many-body physics or mathematical physics.
3. Fluency in English.

**Starting Date:**

Fall 2020

**Term & Working hours:**

Term: Full-time, fixed term appointment for 3 years.

**Compensation & Benefits:**

We pay an internationally competitive salary, which is raised upon completion of every additional year after the PhD award. A housing allowance of up to 80% of the rent complements the salary (in accordance with OIST regulations).

Additional benefits:

- Relocation and commuting allowances
- Annual paid leave and summer holidays
- Health insurance, welfare pension insurance and worker's accident compensation insurance

**How to Apply:**

Apply by uploading your Submission Documents through Academic Jobs Online under the link

<https://academicjobsonline.org/ajo/jobs/15684>

or by emailing them to:

**quast.oist@gmail.com**

For further information please contact Philipp Hoehn under the above email address.

**Submission Documents:**

- Cover letter
- Research statement including summary of past achievements and future research plans
- Curriculum vitae including publication list



- Three letters of reference

**Application Due Date:**

Applications will be screened as they come in. Preferably they should be received by December 31st, 2019. However, given the short notice, applications will be considered until the positions are filled in approximately mid January 2020.

- \* 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 women and minority candidates to apply.
- \* 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.
- \* 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 ([www.oist.jp](http://www.oist.jp)).