



**Okinawa Institute of Science and Technology**  
**Postdoctoral Research Positions in the Biological Physics Theory Unit**

The Okinawa Institute of Science and Technology Graduate University (OIST) is a model for change in education and research with the best international graduate students, working side by side with world-class faculty in modern well-equipped laboratories. Beautifully situated on the island of Okinawa, OIST relies on a cross-disciplinary approach, with an emphasis on creativity and exchange, to offer unique, individualized graduate training. OIST is a university with no departments, eliminating artificial barriers between people working in different fields, but many nationalities, with students and faculty being attracted from all over the world. Concentrating initially on Neuroscience, Molecular Sciences, Mathematical Sciences, Environmental and Ecological Sciences and Physical Sciences, OIST is bringing some of the best brains in the world to Okinawa to transform the way science and education is done in the global academic world.

**Position summary:**

The [Biological Physics Theory Group](#) at [OIST Graduate University](#) is seeking postdoctoral researchers with a strong background in physics or related discipline, a keen interest in living systems and the ability to work independently. Research in the group focuses on a quantitative understanding of animal behavior with theoretical analysis leveraging dynamical systems, information theory and statistical physics, and we work in close conjunction with novel high-resolution measurements of organisms in solitary and social settings. Substantial computational resources are available, including for deep learning, and for scientific travel. Salary and benefits are competitive with international standards and include a housing allowance. The appointment is for one year and can be extended. Modern biophysics is a rapidly growing and exciting field and the successful candidate will have many opportunities to participate in this growth, both at OIST and as part of our collaborations from around the world. Interested applicants should hold a PhD in physics or closely-related discipline and provide a Curriculum Vitae along with contact information for 3 references.

**Unit summary:**

The Biological Physics Theory Unit is pioneering a new field – the physics of behavior: from individual organisms to entire societies. While the science of the



living world is mostly focused on the microscopic, such as the expression of genes or the pattern of electrical activity in our brains, all of these processes serve the greater evolutionary goals of the organism: to find food, avoid predators and reproduce. This is the behavioral scale, and despite its importance, our quantitative understanding of behavior is much less advanced. But how do we quantify the emergent dynamics of entire organisms? What principles characterize living movement? Research in our unit addresses these fundamental questions with a modern biophysics approach and model systems ranging from the nematode *C. elegans* to zebrafish, honeybees and even squid. We combine theoretical ideas from statistical physics, information theory and dynamical systems and work in close collaboration with scientists from OIST and around the world to seek unifying principles from novel, quantitative experiments of organisms in natural motion.

**Position:**

Postdoctoral Researchers in the Physics of Behavior  
Biological Physics Theory Unit

**Working Location:**

Onna-son, Okinawa, Japan

**Responsibilities:**

The successful candidate will engage in ongoing and active independent research as well as contribute to the research program of the Biological Physics Theory group, including attending meetings and seminars and mentoring student research.

**Qualifications:**

**(Required)**

PhD in physics or closely-related discipline

**Term:**

Full-time, fixed term appointment for 1 year/2 years. Contract initially with 3 month probationary period (inclusive). This contract may be renewed.



**Working hours:**

9:00-17:30 (Discretionary)

**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)

**Submission Documents:**

- Curriculum vita in English (and Japanese if available)
- Names and contact information of 3 referees who be able to supply a letter of recommendation

**Starting Date:**

Negotiable

**Application Due Date:**

Applications will be received until the position is filled.

**Application Address:**

Please submit all required application materials by email to:

**greg.stephens** #oist.jp

(Please replace # with @ before using this email address)

\* 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)).