

## **Post-doc in Biophysics & Image Analysis for ERC funded project**

### **What we are looking for**

Applications are welcome from early-career scientists with outstanding track records in the fields of image analysis, **microbiology**, **biophysics**. Selection of applicants starts immediately.

### **Job / Project Description**

In an ERC funded project, the Kiers group (Evolutionary Biology, VU University) and the Shimizu group (Systems Biophysics, AMOLF) are accepting applications for a post-doc with exceptional skills in image analysis, microscopy, and/or modeling of transport processes in microbes.

Our aim is to track and analyze the dynamics of nutrient transport inside complex fungal networks in symbiosis with host plants. These fungi offer a unique opportunity to study complex flow patterns (bi-directional flow within random-graph networks) in a research context firmly embedded within an important biological question. Specifically, we are interested in the factors organizing fluid flow across fungal filament networks, and how information and resources are shared across these integrated networks.

The successful post-doc will further develop our automated imaging system to measure velocities, flow dynamics, and oscillatory patterns of nutrients within hyphal networks. This will allow us to better understand the evolution of microbial trade strategies.

### **Cross-discipline collaboration**

We offer a unique opportunity for a post-doc to contribute to cutting-edge research into the evolution of symbioses by working at the intersection of Evolutionary Biology and Biophysics. Housed primarily at the AMOLF Systems Biology Lab with Professor Shimizu, the successful candidate will develop a suit of tools to understand what drives oscillatory dynamics across fungal networks. Ultimately, we are interested in understanding whether plant hosts can influence how fungal symbionts distribute and trade their nutrients.

### **Requirements**

- Candidates should hold a Ph.D., with a strong background in image analysis, experimental physics and/or biophysics
- Outstanding publication record
- Excellent ability to communicate in both written and spoken English
- Ability to start within 2 months

Particular preference will be given to candidates with prior experience with image analysis, microbiology and/or modeling fluid dynamics.

### **Further particulars**

VU University Amsterdam is one of the leading institutions for higher education in Europe and aims to be inspiring, innovative, and committed to societal welfare. It comprises twelve faculties and has teaching facilities for 25,000 students.

AMOLF is one of the top research laboratories of the Netherlands Organisation for Scientific Research Institutes (NWO-I), specializing in the physics of complex matter.

The appointment will be for a period of 1.5 years, with potential grant opportunities to follow.

**Salary**

Payment will be according to the standard regulations, from € 2,427 up to € 3,831 gross per month (salary scale 10) depending on experience and based on a full-time employment.

**Application**

Applicants are requested to write a letter in which they describe their abilities and motivation, accompanied by a curriculum vitae. Please include the names of two references, including emails, phone numbers and their relationship to you. Please send application in a single pdf-file only.

Applications should be sent to: [toby.kiers@vu.nl](mailto:toby.kiers@vu.nl)

**Information**

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