Quantitative Evolutionary Microbiology Laboratory

How Microbes Grow | Interact | Evolve

Postdoctoral fellow in statistical physics or computational biology

Application review begins May 1, 2024

RUTGERS

Who are we? We are the Quantitative Evolutionary Microbiology Laboratory, led by Dr. Michael Manhart. The QEM Lab aims to understand the fundamental principles of evolution in microbes. To this end we work at the interface of biophysics, evolutionary biology, and microbiology using theoretical, computational, and experimental approaches. We are based at Rutgers University in the Center for Advanced Biotechnology and Medicine, an interdisciplinary life science research institute. We are also affiliated with the Rutgers University Microbiome Program and the Center for Quantitative Biology.

This position is part of a collaboration with the labs of Dr. Meike Wortel (Swammerdam Institute of Life Sciences, University of Amsterdam) and Dr. Daniel Charlebois (Department of Physics, University of Alberta).

Who are we looking for? We are looking for a postdoctoral fellow to start in the summer or fall of 2024. By the start date, you must have a Ph.D. in a theoretical or computational field of science, including but not limited to physics, theoretical/computational biology, applied math, or computer science. Expertise in statistical physics, neural networks/machine learning theory, evolutionary theory, or bioinformatics is valuable. Previous experience in biology is not required, but you should have a strong interest in learning the biological foundations of this project. We encourage applications from a diverse range of candidates, even if you don't think you're a perfect fit.

For more information about what we look for in new lab members, please see our lab's website.

What do we offer? We offer a postdoctoral fellow position on the predictability of evolution across biological scales of complex microbial ecosystems. You will develop a theory of evolutionary predictability, perform evolutionary simulations, and analyze high-throughput sequencing data from yeast evolution experiments to test the theory. You will present this work at local and international meetings, write papers, and apply for additional funding if necessary. You will also interact with other members of the QEM Lab at Rutgers, who are working on projects ranging from the evolution of microbial population dynamics to studying the effect of interactions on adaptation in microbial communities.

The salary will begin at $61,805/year, with benefits including comprehensive health insurance and retirement contributions. The position is funded for 3 years.

Where are we? Rutgers University is the eighth-oldest institution of higher education in the US and now one of the largest, with approximately 40,000 undergraduates, 20,000 graduate students, and over 8,000 faculty. Our center is based on the Piscataway/New Brunswick campus in New Jersey, part of the New York metro area and one of the most culturally and naturally rich areas of the country. We have convenient connections to the NJ Transit and Amtrak rail networks as well as to Newark Liberty International Airport.

How to apply? Please fill out the application form at this link: https://forms.gle/hMNgrh3Ja5dPUqfWA

When to apply? Apply by May 1, 2024 to receive full consideration. If you have questions, please contact Dr. Michael Manhart at mmanhart@rutgers.edu.