

## Projects in Microbial Genomics/Bioinformatics at UC Merced, California

Carolin Frank  
Assistant Professor  
University of California, Merced  
Email: [cfrank3@ucmerced.edu](mailto:cfrank3@ucmerced.edu)  
Project start: Fall 2010  
<http://www.ucmerced.edu/>  
<http://granada.ucmerced.edu/~cfrank/Home.html>

I am looking for students with programming or wet lab experience who want to do their “examensarbete” in genomics. Our lab focuses on the evolution, ecology and genomics of bacteria and fungi that live in close association with animal hosts. In particular, we are interested in how these interactions affect the response of plants and animals to climate change. All our work is based on DNA sequencing, and though we collect samples in the field, most of our work is bioinformatic. We study microbes in three systems: Caribbean corals, conifers under manipulated climate in the Colorado Rockies, and conifers and grasses in Yosemite National Park meadows. Through the Department of Energy Joint Genome Institute, we are sequencing the genome of a Scots Pine endosymbiont *Methylobacterium extorquens*. Moreover, we work on publicly available genomes, trying to understand the connection between the genome, its environment, and its mobile genetic elements.

Some suggestions for projects:

- Comparative genomics in the *Methylobacterium* genus
- Analysis of environmental pyrosequencing data from corals and conifers

I am also open to working with students who have their own project ideas for genomics and bioinformatics that align with my interests.

Between 1994 and 2000, I was a student in Molecular Biotechnology at Uppsala University, and as a PhD student, I taught Applied Bioinformatics to students in the Bioinformatics program. I am especially interested in working with students from these programs.

UC Merced is the newest campus in the University of California system, and the first American research university to be built in the 21st century. It is located in California's San Joaquin Valley, between the coast and the Sierra Nevada. We are two hours southeast of San Francisco, but even better, 90 minutes west of Yosemite National Park! Merced has around 80,000 inhabitants, but feels smaller. If you come here, you will appreciate the low cost of living, the ease of making friends and connecting with faculty at a small but world-class university, and most of all the proximity to Yosemite and other spectacular nature experiences.

Since our summers are unbelievable hot, I would recommend coming here in the fall/winter/spring. The VISA process, which I will help with and pay for, takes about four months.

Bring a friend! My husband, Assistant Professor David Ardell, is also looking for project students in computational biology and bioinformatics <http://www.ucmerced.edu/faculty/facultybio.asp?facultyid=107>