



Recruiting: Postdoctoral research associate

Project: Addressing misclassification in the microbiome: A data-scientific approach to propagating uncertainty in microbial community composition

Institutions: University of Wisconsin–Madison (Dr. Thea Whitman and Dr. Karl Broman) and the University of Washington (Dr. Amy Willis)

Salary: \$47,476 or commensurate with experience, with the potential for renewal for a second year

We are recruiting a postdoctoral researcher to work on a multi-institutional project developing an automated pipeline for analyzing microbiome data that adjusts for different levels of data quality in the microbial genome sequencing process. Bioinformatics choices have an enormous impact on microbiome data analysis, but the preprocessing and statistical analysis steps are almost always considered as independent steps. The project will develop a method and software to integrate information about data quality (e.g., in taxonomic assignment) into data analysis (including, but not limited to, hypothesis testing). A core goal of the project is improving the reproducibility of microbiome studies.

The successful candidate will join a dynamic team of researchers, working with the PIs to develop the algorithms and programming the pipeline. The pipeline will be implemented as an open-source R package that provides methods to estimate, propagate and visualize uncertainty in microbiome data. The postdoc will also develop and run day-long workshops and for users of the pipeline. In order to provide access to a robust data science community and increased training and professional development opportunities, the postdoc will participate actively in the UW-Madison Data Science Hub, dedicating 10% of their time to hub activities such as training for and then leading Data or Software Carpentry workshops and participating in data science seminars.

The ideal candidates will have interest in one or more of the following areas:

- Microbiome data analysis and methods development
- Bioinformatics
- Statistics
- Microbiology/microbial ecology
- User-focused software development

In addition, ideal candidates will have expertise in one or more of the following areas:

- Bioinformatics pipelines for marker gene analysis and/or microbial ecology
- Data quality in high throughput sequencing
- Bioinformatics pipelines for microbial ecology
- Software development in R and/or python

The position will ideally start during fall of 2018. Completion of the PhD degree is required before beginning the position. Application review will begin August 20, 2018. To apply, please email twhitman@wisc.edu and adwillis@uw.edu the following materials:

- Cover letter/statement of interest
- CV
- Code sample (optional)
- Publication or research sample (optional)

We encourage women, minorities, veterans, and people with disabilities to apply for this position. UW–Madison is an equal opportunity employer that hires without regard to, but not limited to, the following: gender, race, color, national origin, sexual orientation, creed, religion, age, marital status, disability, genetic information, political affiliation, ancestry, status as a veteran or disabled veteran, or other classifications protected by state or federal laws.