



## **Postdoctoral position to infer neuronal gene regulatory networks from bulk and single cell data**

A postdoctoral position is immediately available in Dr. Sushmita Roy's research group to develop and apply computational methods to build genome-scale cell type-specific predictive regulatory networks in mammalian developmental lineages with a focus on neuronal cell types. This position entails integrating published and novel transcriptional and epigenomic datasets from bulk and single cell omic data to construct cell type-specific regulatory networks and generate prioritized predictions that will be tested in collaboration with experimentalists. The postdoc will be working in close collaboration with developmental biologists and stem cell engineers at the Wisconsin Institute for Discovery as well as neurobiologists at the Waisman center, UW Madison.

The Roy lab's research focuses on computational network biology and regulatory genomics. We are specifically interested in developing tools, based on statistical machine learning, to predict regulatory network structure and function in diverse dynamic processes. We aim to use these genome-scale networks to construct predictive models of complex phenotypes in mammalian systems. We work in close collaboration with developmental biologists who are interested in how gene regulatory networks drive overall cellular fate and are able to test model predictions as well as to generate new datasets to improve regulatory network reconstruction.

The Roy lab is situated in the Wisconsin Institute for Discovery (WID). The WID, established in 2010, has state of the art research and computing infrastructure and was voted the 2012 Laboratory of the Year. WID offers a unique interdisciplinary and highly collaborative environment bringing together scientists spanning broad computational and biological disciplines including epigenetics, systems biology, optimization and stem cell engineering.

### **REQUIREMENTS:**

Either a PhD in computer science, statistics, machine learning with an interest to learn about genomic data analysis, OR, a PhD in computational biology, bioinformatics, with papers in leading computational biology venues.

### **LOCALE:**

Madison, WI, USA

**HOW TO APPLY:** To apply, please send (1) CV with publications, (2) statement of research describing current research and future goals, and, (3) contact information of three references. Please send this information to [sroy\[at\]biostat.wisc.edu](mailto:sroy[at]biostat.wisc.edu).