



## Dr. Fayuan Wen

Dr. Fayuan Wen is an Assistant Professor of Computational Biology within the Department of Biology. She adeptly applies advanced computational biology techniques and biostatistical tools to biomedical and health research domains. Dr. Wen's expertise lies in the analysis of bioinformatics data from next-generation sequencing (NGS) such as RNA-seq and Whole Genome Sequencing (WGS). Her research trajectory encompasses diverse areas, including whole genome sequencing analysis of Sickle Cell Disease (SCD), investigations into gene regulation during host-virus interactions, cellular transcriptional responses to chemical treatments, and bioinformatics inquiries into overwintering insects.

Currently, Dr. Wen focuses on gene variant identification relevant to Iron Overload in Sickle Cell Disease, utilizing genome-wide association studies (GWAS) and machine learning-based Polygenic Risk Score Analysis. Additionally, her projects involve rigorous bioinformatics analysis of NGS data and biostatistical evaluations of electronic health record data, underscoring her multifaceted contributions to the field.

### **Get To Know Dr. Wen:**

#### **What are your research interests?**

My research interests lie at the intersection of computational analysis for Next-Generation Sequencing (NGS) data and substantial data mining in the field of biology. I am committed to advancing my ongoing research endeavors, which predominantly encompass bioinformatics analyses within the domains of Sickle Cell Disease (SCD) and Human Immunodeficiency Virus (HIV). I aspire to leverage electronic health record data to develop predictive models for disease complications and to refine treatment strategies. By employing advanced computational techniques, my objective is to contribute substantively to enhancing our understanding of these complex medical conditions and to drive improvements in patient care.

#### **What courses will you be teaching this Fall?**

I will teach Biostatistics this fall:

CRN 82210 - BIOG 430 – 01. Two sessions

CRN 82210 - BIOG 430 – 02. One session

#### **What are you looking forward to most this academic year?**

As a new faculty member, I'm looking forward to a variety of exciting opportunities and challenges this academic year. Building positive and supportive relationships with students and immersing myself in my field of expertise and collaborating with colleagues on research projects is my priorities. I'm enthusiastic about embracing all aspects of my new role as a faculty member and making meaningful contributions to Howard University's academic community!