Job Description: Postdoc in Antibiotic resistance modeling

Position Summary

The Department of Biological Systems Engineering at Virginia Tech is seeking a Postdoctoral Fellow to assist in a NSF-funded research project. The project will focus on "Halting Environmental Antimicrobial Resistance Dissemination". Several urbanized watersheds around the world (India, China, U.S, Switzerland, and Sweden) will be modeled using the Soil Water Assessment Tool (SWAT). Responsibilities also include, improving the existing SWAT model, quantifying the influence of land use and land cover change on urban wastewater treatment facilities and modeling the receiving environment. The selected individual will work with Dr. Venkat Sridhar, and a team of researchers in the Department of Civil and Environmental Engineering at Virginia Tech. The selected individual will lead model development and programming efforts, and will also participate in field data collection.

Required Qualifications

PhD in agricultural, biological, or biological systems engineering, civil/environmental engineering, hydrology or related field completed by the position start date.

- Experience with hydrologic modeling and geographic information systems (GIS).
- Knowledge of hydrology, bacteria and antibiotic resistance modeling
- Strong computer programming abilities, preferably C, C++, Fortran, R, Python, and/or Matlab.
- Strong verbal and written English communication skills.

Work Unit

The BSE Department at Virginia Tech is recognized both nationally and internationally for its education, research, and extension and outreach programs. The BSE Department consists of 17 tenured and tenure-track faculty, eight research scientists/research associates, three extension specialists/associates, and 12 technical staff/administrative professionals. Additional information about the BSE Department can be found at https://www.bse.vt.edu.