

# Solving Problems with Data Science at Virginia Tech

## Summer REU 2023

### Data Sciences Project:

Transport of Hazardous Agents in the Air and Water (Schmale Lab)

### Project Description:

New technologies with quick turn-around times are needed to understand the transport and fate of hazardous agents in the air and water. Students will work with robotic systems (drones, boats, and submarines) to study the transport of hazardous agents (e.g., pathogens, toxic cyanobacteria, colored dyes, smoke, and genetically engineered pollen) in the air and water. Environmental data will be collected and analyzed to solve problems related to the sources, aerosolization, transport, and deposition of these agents.

### Expected Qualifications of Students:

Students are expected to have a basic understanding of biology and engineering. Experience with robots and/or microbiology desired.

### Faculty Bio:

Dr. David Schmale is a full professor in the College of Agriculture and Life Sciences at Virginia Tech. He received his B.S. from the University of California, Davis, and his Ph.D. from Cornell University.

Website: <https://www.schmalelab.spes.vt.edu/> | Twitter & Instagram: @SchmaleLab

