

Solving Problems with Data Science at Virginia Tech

Summer REU 2024

Data Sciences Project:

Emission, Transport, and Deposition of Atmospheric Microplastics (Foroutan Lab)

Project Description:

Recently, atmosphere has emerged as a relevant environment for microplastics (MPs), not only due to potential inhalation of tiny airborne plastic particles, but also because it may be an important pathway for MPs between other environments. Students will design field and lab experiments as well as atmospheric trajectory models to study emissions, atmospheric transport, and deposition of MPs in the environment. Analyses of the collected data help to address plastic pollution – one of the most pressing environmental problems of our time.

Expected Qualifications of Students:

Students from STEM majors expected; familiarity with instrumentation, lab work, and computer programming is a plus.

Faculty Bio:

Dr. Hosein Foroutan is an associate professor of Civil and Environmental Engineering at Virginia Tech. He received his Ph.D. from Penn State and has worked at the US Environmental Protection Agency (US EPA).

Website: <https://www.airflows.cee.vt.edu>

