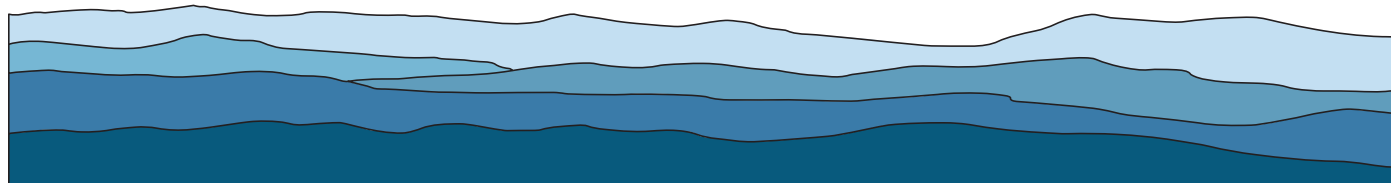


# HIGHLANDS IN CHEMISTRY SEMINAR SERIES



## LINSEY MARR

VIRGINIA TECH

**“What do environmental engineering and chemistry have to do with transmission of the flu?”**

FEBRUARY 14, 2020

2:30PM

HAHN HALL NORTH 140

FACULTY HOST:  
JOHN MORRIS

The flu is responsible for an estimated 36,000 deaths, 3.1 million hospitalization days, and 31 million outpatient visits per year in the US. Addressing large gaps in knowledge about transmission of the flu, we have employed an interdisciplinary approach based on environmental engineering and aerosol science to show that airborne transmission is likely and that environmental conditions affect the transmissibility of the influenza virus. We hypothesize that humidity-controlled changes in the chemistry of respiratory droplets affect virus viability. Viruses are released from infected hosts in respiratory droplets that undergo partial or complete evaporation in the environment. Resulting changes in their chemical composition could lead to inactivation of the virus. Results of this research have the potential to promote improvements in infection control strategies and prediction of the pandemic potential of emerging virus strains.

