

# SEMINAR

## **Indoor aerosol dynamics during cooking and cleaning activities: Insights from the HOMEChem study**

**Marina Vance**

Mechanical Engineering & Environmental Engineering Program  
University of Colorado Boulder

In the United States, as well as in most of the developed world, people spend about 90% of their time in indoor environments. Although many research efforts have focused on assessing the presence and quantity of chemical air pollutants that affect the indoor air quality, few comprehensive studies have attempted a deeper exploration into how indoor air chemical compounds may interact and transform throughout a normal day of activities. The HOMEChem (House Observations of Microbial and Environmental Chemistry) study was a month-long collaborative investigation into the chemistry of indoor environments that took place in the summer of 2018 at the University of Texas at Austin's test house, a three-bedroom, 2-bathroom manufactured home. This study investigated the effects of building occupants and their activities, such as cooking and cleaning, on the chemistry of the gas phase, particle phase, and surfaces in a simulated home environment. This study incorporates state-of-the-art atmospheric chemistry instrumentation from multiple research groups to build a shared dataset from those measurements. This presentation will focus on results from size-resolved particulate matter measurements, ranging from 1 to 20,000 nm, as well as black and brown carbon optical absorption measurements.

**Monday, September 23, 2019, 3:30 p.m**

Refreshments 3:15 p.m

NCAR Foothills Laboratory

3450 Mitchell Lane, Boulder, CO 80301

FL2-1022, large seminar room

Live webcast: <http://ucarconnect.ucar.edu/live>

For more information please contact Bonnie Slagel, [bonnie@ucar.edu](mailto:bonnie@ucar.edu), phone 303-497-8318.