

# SEMINAR

## Satellite Remote Sensing of Aerosols for Air Quality and Climate Studies: Current Capabilities and Next Steps

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**Abstract:**

Atmospheric particulate matter (PM), or aerosol particles, are solid or liquid matter suspended in the air. Worldwide, PM air pollution is a major environmental concern in many countries, and aerosol effects on climate are the puzzles that many climate scientists are working hard to solve. To tackle both pollution and climate issues, ground-based observation data alone is insufficient because aerosols have large spatial and temporal variability. Since 1999 when NASA launched Terra, the first satellite as part of its Earth Observation System (EOS), many new techniques have been developed to measure aerosols and surface PM air quality from space, thereby providing much-needed information for aerosol research. In this talk, I will provide a brief overview of the progresses we made in this area. A few examples from my research group will be provided, with an emphasis on the integration of satellite data and atmospheric models toward a holistic understanding and prediction of aerosol sources and processes. Lastly, I shall give an outlook of several near-future satellite observations for studying aerosols and fires that my research group is involved in.

Date: **Thursday, April 23** (*Please note day*)  
Time: 3:15pm refreshments, 3:30pm seminar  
FL2-1001, Small Auditorium

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