

Seminar Speaker
Pablo Saide

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National Center for Atmospheric Research



Monday, April 4, 2016 at 2PM
Bourns Hall A265

***ADVANCING PREDICTIONS OF AEROSOLS AND ITS WEATHER IMPACTS BY
REGIONAL TO LOCAL SCALE SIMULATIONS AND DATA ASSIMILATION***

Abstract: Atmospheric aerosols, which are tiny particles suspended in the atmosphere, can strongly affect our society in multiple ways such as reducing visibility, affecting our health, and changing climate and weather. Thus, it is important to skillfully model and predict aerosols to reduce uncertainties in the assessments of its effects. In this presentation I will show recent advancements in this area, including: 1) Assessing the improvement in aerosol forecasts after assimilating geostationary satellite data for a real case scenario in north-east Asia; 2) Improving biomass burning smoke simulations to evaluate the impact of Central American biomass burning on tornado occurrence and intensity in the southeast US through aerosol-cloud-radiation interactions; 3) Constraining smoke emissions with multi-platform observations of an historical wildfire in California (Rim Fire) to explore emissions biases, diurnal cycle and day-to-day variability, and to assess impacts to air quality and meteorology; and 4) Development of tools for forecasting air pollution episodes in Chile which occur under complex terrain and stagnant weather conditions. Future directions will also be discussed.

About the Speaker: Pablo Saide is an Advanced Study Program (ASP) postdoctoral fellow. He has a PhD degree in Civil and Environmental Engineering from the University of Iowa and bachelor and master degrees in Mechanical Engineering at the University of Chile. His field of study is atmospheric sciences and chemistry, with a focus on regional weather and air quality modeling and forecasting, aerosol-cloud-radiation interactions, satellite remote sensing and data assimilation.