

**Sonny Astani**

Department of Civil and Environmental Engineering

USC **Viterbi**  
School of Engineering

## Seminar Presentation

**Dr. Michael Kleeman**  
**University of California, Davis**

**Thursday, November 14, 2019**  
**EEB 248**  
**4:00-5:00pm**

### **Long-term exposure modeling for ultrafine particulate matter**

#### **Abstract:**

Ultrafine particles ( $D_p < 100\text{nm}$ ) are widely recognized to be toxic in laboratory testing but epidemiological studies often struggle to find associations with public health. This presentation will discuss challenges for ultrafine particle exposure assessment using a traditional monitoring strategy. The continued development of regional chemical transport models to predict ultrafine particle concentrations across California will then be described. Predicted ultrafine particle concentrations between the years 2000-2016 will be compared to measurements across multiple field studies to illustrate the strengths and weaknesses of the regional model calculations. Trends in ultrafine particle mass and number concentration will then be discussed. The chemical composition and source contributions to ultrafine particles will be described, and results from a preliminary epidemiological analysis using the cohort from the California Teachers Study will then be presented.

**3620 S. Vermont Avenue, KAP 210**  
**Los Angeles, CA 90089**  
**213-740-0603**

