



# AirUCI Institute

*...smart energy, sustainable environment*



## Legislators Day Schedule

- 8:45 – 9:00 Check in, coffee, seating in Natural Sciences building 2, room 1201
- 9:00 – 9:20 Welcome, introductory remarks from AirUCI's Co-Directors and UC Irvine's Sustainability Leadership
- 9:20 – 9:50 Climate Science and Air Quality 101: Sources, Solutions, and Impacts
- 9:50 – 10:00 **BREAK:** gather to form groups
- 10:00 – 11:45 Get a first-hand look at our ground-breaking research from internationally known experts showing why climate change is accelerating and what we can do about it, how controlling air pollution can impact climate change, potential issues in transitioning away from fossil fuels, and at the science we conduct to address these issues.
- 11:45– 1:00 **LUNCH:** Q&A with our researchers—a great opportunity to learn more from our team

<b>Prof. Finlayson-Pitts Lab:</b>	Secondary organic aerosol particles from gases and their impacts on climate and health
<b>Prof. Nizkorodov Lab:</b>	Biomass burning aerosol particles and their impacts on climate and health
<b>Prof. Saltzman Lab:</b>	Changes in atmospheric composition over long time scales by measuring trace gases in ice cores
<b>Prof. Czimeczik Lab:</b>	Distinguish man-made vs. natural sources of gases and pollutants using accelerator mass spectrometry
<b>Prof. Blake Lab:</b>	Air sampling to detect carbon dioxide, methane, volatile organic compounds, and other trace gases in air
<b>Dynamometer Facility:</b>	Gas and particle emissions from brake and tire wear which will still remain as we transition to electric vehicles

## Meet the Professors

You will visit the laboratories of these five UCI professors to see some of the many research projects they undertake. Each of our 32 faculty members is considered an expert in one or more environmental fields, and the projects you'll see in these labs are important for elucidating climate change and air quality issues and potential solutions today. Additional details can be found on our People page at [www.airuci.uci.edu/people](http://www.airuci.uci.edu/people).

- **Donald Blake**, Chemistry: identifies and quantifies atmospheric gases via air samples collected on land, ships, and aircraft, then returned to his laboratory for analysis.
- **Claudia Czimczik**, Earth System Science: impacts of climate change, natural events (i.e. fire), land use and management (i.e. urbanization) on the cycling of carbon and nitrogen in ecosystems.
- **Barbara Finlayson-Pitts**, Chemistry: formation, growth, and reactions of new particles in air, and environmental impacts of neonicotinoid pesticides.
- **Sergey Nizkorodov**, Chemistry: absorption of solar radiation by air pollutants and effects of sunlight on the physical, chemical, and toxicological properties of organic particles.
- **Eric Saltzman**, Earth System Science: atmospheric cycling of trace gases that may impact the climate system, and analyzes trace gases in ancient air trapped in polar ice cores

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These two faculty members are leading lab tours along with Prof. Finlayson-Pitts:

**Annamarie Carlton**, Chemistry: man-made emissions and their chemical transformation in the atmosphere which drive climate change, with a particular interest in agricultural emissions.

**James Smith**, Chemistry: chemical processes responsible for the formation of nanometer-sized particles in the atmosphere, as well as their impacts on human health and the Earth's climate.

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We also have several other AirUCI faculty members participating who are happy to answer questions.

**Andrea de Vizcaya-Ruiz**, Public Health: effects of particulate matter, specifically studying the tissue injury caused by inflammatory and oxidative stress.

**Rufus Edwards**, Public Health: human exposures to household air pollution from solid fuels, household combustion sources, greenhouse gases and particulate matter, and small scale industries

**Celia Faiola**, Ecology and Evolutionary Biology: atmospheric chemistry of plant emissions in natural and urban environments.

**Sarah Finkeldei**, Chemistry: nuclear materials chemistry for advanced nuclear fuel development and nuclear waste management.

**Kim Fortun**, Anthropology: environmental risk and disaster as well as environmental justice and governance, with a particular focus on industrial disasters.

**Michael Kleinman**, Public Health: how inhaled particles and gases, their size, and their chemical composition affect the heart and lungs.

**Michael Prather**, Earth System Science: modeling and assessment techniques for greenhouse gases and their effects on climate change.

**Manabu Shiraiwa**, Chemistry: aerosol particles and their effects on atmospheric chemistry, air quality, and human health with expertise in indoor air pollution.

**Jun Wu**, Public Health: air pollution exposure, epidemiology, as well as environmental justice and health equity issues.