Air Sensors International Conference

Pushing ahead: application and communication in science

Poster Presentations

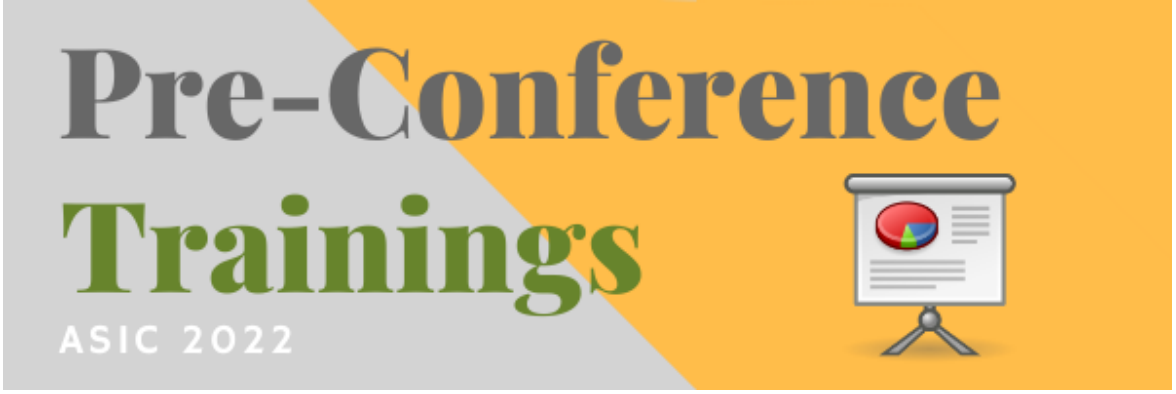
In addition to the 150+ Oral Presentations, the 2022 ASIC program is proud to host over 85 poster presentations! Almost half of these poster presenters will also be giving a Lighting Talk before the Welcome Reception & Poster Review on Wednesday evening. Take a look at what topics our Poster Presenters are covering as part of their lightning talks and poster displays:

- Air Sensor Use in India - **1 Poster**
- Clean Air Monitoring and Solutions Network: getting useful, actionable data out of low cost sensors for air quality action - **18 Posters**
- Communication Strategies for Understanding, Insight, and Action - **1 Poster**
- Community Air Sensor Use - **5 Posters**
- Filling in the air quality data gap and enabling air quality management in LMICs using low-cost sensors - **2 Posters**
- Indoor Sensing for Air Quality Control and Ventilation Applications - **4 Posters**
- Innovative Sensor Technologies - **10 Posters**
- Merging sensor data with other air pollution data sources: methods and benefits - **5 Posters**
- Mobile Monitoring/Monitoring Mobile Sources - **2 Posters**
- Performance targets for air quality sensors - **11 Posters**
- Sensor Networks: From nuts and bolts to real-world impacts - **11 Posters**
- Standard, Supplemental and Informational Monitoring - **4 Posters**
- The Potential of Air Sensors for Personalizing and Advancing Human Health Research - **8 Posters**
- Youth-Focused Education and Youth-Lead Initiatives - **7 Posters**

The Poster Review will take place during the welcome reception, in-person, at the Pasadena Convention Center for all our in-person attendees. During that time, Poster Presenters will be available with their project information to answer your questions and discuss their research and work in greater depth. After the reception concludes, poster displays will remain on display in the exhibit hall for the full duration of the conference.

Thursday morning, we will continue the poster review on our virtual platform for all our virtual attendees. Virtual and in-person participants will be able to review PDFs of the poster display as well as a 1-2 minute video overview of the poster topic. Through the robust virtual platform, all participants will be able to ask questions and provide feedback to all presenters during this special virtual session. More details to come!

Review Presentation Abstracts here



As part of the 2022 ASIC Program, we are offering several trainings to support attendees' general knowledge and basic comprehension of the main concepts and issues highlighted in the program content.

These trainings are designed by industry experts to provide some basic background and knowledge to attendees about air quality sensors and applications. Some trainings will ensure attendees have a base knowledge to thoroughly understand the conference content, while others will add to knowledge of applications and ideas discussed at the conference.

List of Current Trainings:

- Air Quality Foundations:10 things you need to know about air sensors
- Sensor Data Science Bootcamp

Date: Tuesday, May 10, 2022
Time: 4:00 pm - 6:00 pm
Registration will be available in April.

Trainings are approximately 2 hours each on May 10, 2022, from 4:00 pm to 6:00 pm at the Pasadena Convention Center and have limited space. These trainings will only be offered in-person. Attendees will only be able to register for one training.

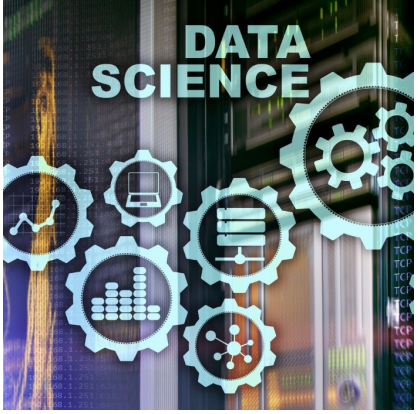
Air Quality Foundations:
10 things you need to know about air sensors

Designed for community groups and those new to the sensor world, this workshop will cover the 10 basics you'll need to know to start using air sensors in your community. This 2 hour session will include demos, resources lists, worksheets, and interactive activities. We'll provide you with the tools to identify who your key stakeholders are, what to monitor, how to select the right sensors, how to manage data, and more.

Instructors: Tim Dye, *TD Environmental*, Aubrey Burgess, *DDPHE,* Jessa Ellenburg, *2B Technologies*

Sensor Data Science Bootcamp

The proliferation of low-cost aerosol and gas sensors has sparked much interest among the air-quality community. Such devices show promise to enable measurements at



unprecedented spatial and temporal scales, which, in turn, can lead to the creation of distributed sensor networks to support both traditional research and community-based research. With these exciting prospects, however, come challenges of sensor performance, sensor reliability, and data management.

This introductory tutorial will review basic principles of statistics and data science for real-time aerosol sensors, with a focus on low-cost (<$2,000) devices. Topics to be covered will include data management and cleaning, exploratory data analysis, linear models, troubleshooting techniques (and potential solutions), statistical issues relevant to time-series data (such as autocorrelation), and determination of analytic figures of merit (e.g., accuracy, bias, prevision, limit of detection). Participants need not have formal training in data science beforehand; self-help resources for learning basic data science in the R and MATLAB programming languages will be provided.

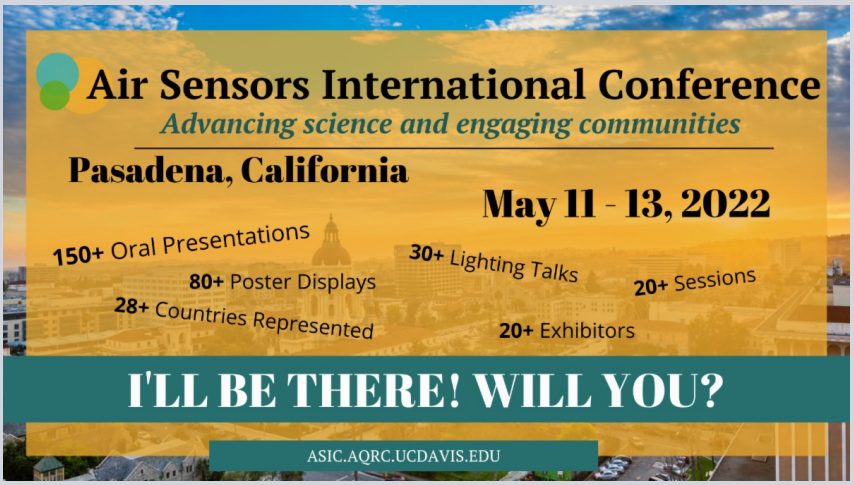
Instructors: John Volkens, *Colorado State University,* Joshua Apte, *University of California, Berkeley*

More trainings in development! Registration to open in April.

Learn about the trainings

Spread the Word!

Do you know a colleague, industry partner, or community group who would be interested in attending ASIC? Share the program information with your social networks! Publicize your participation and encourage your contacts to register by sharing one of our symposium graphics like the one below!



See More Sharable Graphics

Stay tuned for additional sharable graphics in the coming weeks.

Volunteer Opportunities

Volunteer at ASIC 2022!

Looking for ways to supplement the cost of your attendance at ASIC? Volunteer with us and we will reimburse you a portion of your registration fee!

We have a several volunteer opportunities for you to choose from ranging from being a Session Assistant to a Registration Assistant. All volunteer shifts are separated according to session times and are 3-4 hours each.

Volunteer Opportunities will be available Tuesday - Friday

Express Interest in Volunteering

Reminder: Book Your Hotel Room!

We have partnered with the Hilton Pasadena and the Marriott Sheraton Pasadena to provide ASIC attendees with discounted room rates. We recommend you reserve your hotel room as early as possible to ensure you book the best price!

Book your hotel stay here

Hilton Pasadena
168 South Los Robles Avenue
Pasadena, CA 91101 USA
- General Room Rate: $191
- Federal Room Rate: $182

Marriot Sheraton Pasadena
303 Cordova Street
Pasadena, CA 91101 USA
- General Room Rate: $219
- State Room Rate: $120

Session Spotlights

Our 2022 ASIC Program is packed with daily educational content; with such a wide range of presentation topics, we wanted to take a moment to highlight three of our session offerings. Please stay tuned for additional session spotlights in our upcoming e-blasts!

SESSION SPOTLIGHT

Swimming in Data: The Current and Future State of Data Management Platforms

This Session will focus on:

- Useful, open community system and tools
- Lessons learned from past efforts
- Best practices for data management
- Current gaps and barriers with existing platforms
- Future needs for data management platforms

Session Presentations by

- **Vasileios Papapostolou,** *South Coast AQ Management District**
- **Gayle Hagler,** *US EPA Office of Research and Development*
- **Graeme Carvlin,** *Puget Sound Clean Air Agency*
- **Jonathan Callahan,** *Desert Research Institute*
- **Matt Shrensel,** *Oregon Department of Environmental Quality*
- **Phil Yang,** *George Mason University*
- **Radu Motisan,** *Magnasci SRL*

**indicates invited presentation*

SESSION SPOTLIGHT

Best practices from Breathe London

Lessons learned from integrating hundreds of air quality sensors with the largest and most advanced regulatory monitoring network in Europe

The operators of this network — Imperial College London, the Greater London Authority, and Clarity — will share valuable information and real-world learnings about the use of air sensors at the city scale.

Topics will include:

- **Distribution** - *who should own the sensors, and how should they be distributed to ensure equitable air monitoring coverage?*
- **Siting and installation** - *how to select and prioritize monitoring sites? What indemnity provisions should be made, who is responsible for maintenance, and who is liable for making sure devices are properly installed?*
- **QA/QC and calibration** - *how to ensure data accuracy?*
- **Community engagement** - *how to use a sensor network to build relationships between community groups and local government?*
- **Research applications** - *how has data from the network been used for case studies and research, and what other potential applications exist?*

SESSION SPOTLIGHT

Advanced Measurement Approaches for Fenceline and Fugitive Monitoring Applications

This session will explore the development and application of emerging air measurement approaches to characterize fugitive emissions and to evaluate their air quality impacts on fenceline communities.

Session Presentations by

- **Jeffrey Collett,** *Colorado State University**
- **Kirsten Koehler,** *Johns Hopkins University**
- **Olga Gonzalez,** *Cultivando**
- **Pami Mukherjee,** *South Coast AQ Management District**
- **Jean-Christophe Mifsud**, *RUBIX S&I*
- **Leslie Silva,** *Syft Technologies*
- **Steven Schill,** *Sonoma Technology*

**indicates invited presentation*

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