



## ASIC, Ghana Conference



*Download the above graphic & share it on your social media*

### Current Program Sessions

The next installment of the Air Sensors International Community's International Connection Hub will be in Accra, Ghana October 17-19, 2023. Our Technical Program Committee is excited to welcome folks from across the continent to discuss small air quality sensors that can be used to improve monitoring throughout West Africa and beyond!

#### **Community Based Participation**

This session will discuss using low-cost sensors in community build projects. We will review what considerations should be made when designing a project.

#### **Making Sense of Sensor Data**

This session invites abstracts on the topic of understanding air quality sensor data. We look forward to welcoming presenters working on unpacking complex air quality information for the everyday user. What sensor data can be trusted, and what should be used with caution? How do we get useful, actionable data out of low-cost air sensors? What are the best practices for quality control and quality assurance of air sensor data? What kind of data from air sensors should be shared to the general public, and how? These are just some of the questions we hope to address in this session. We also welcome submissions on novel applications of air sensor data including linking sensor data to other data streams.

#### **Sensor Evaluation & Analysis**

This session will discuss using low-cost sensors in community build projects. We will

review what considerations should be made when designing a project.

## **Data Collection, Analysis and Interpretation**

This session is focused on the methods for analyzing and utilizing low-cost sensor data. How can sensor data be corrected and calibrated to provide meaningful, actionable information? What kind of low-cost / reference colocations, data integrity checks and quality assurance can be created to support low-cost sensor data correction? What kind of statistical methods are appropriate for low-cost sensor data? How can low-cost sensor data be integrated with other data sources (such as health, traffic, or demographic information)? We welcome submissions that address the intricacies of sensor data and how to best use it.

## **Adapting LCS for Smart Air Quality Monitoring in African Cities**

Achieving a high resolution air quality network using conventional air quality monitoring is not practical because of the prohibitive costs. Low-cost sensors have the potential to close the air quality data gaps in data hungry countries such as those in the global South, but establishing a stable data pipeline from sensor networks for continuous monitoring is impeded by unique environmental and infrastructural challenges. Data transmission, availability and reliability are particularly constrained by internet connectivity, unreliable power supply, environmental factors such as dust, rain, humidity, uniquely specific to many African countries. Developing custom-sensor platforms tailored to the unique conditions of the global south is a critical step towards bridging the data gaps. This session aims to highlight the practical considerations of setting up a sustainable data pipeline for low-cost sensor platforms, while highlighting the successful case studies of moving from 'sensors to data'.

## **Data Utility & Action for Air Quality Management**

This session will cover data utility for the development of air quality management practices. Speakers will review case studies about low cost sensors used in monitoring urban air quality, source apportionment and health exposures. Additionally, they will discuss how the data can be used for predicting and communicating health outcomes with the aim to inspire community changes.

## **Policy Development**

There are few opportunities to evaluate the utility of air quality sensor data in relation to air quality improvements resulting from targeted interventions such as, for instance, introduction of car free days in African Cities. The state of sensor technology has matured over time for some pollutants such as PM<sub>2.5</sub>, though still lags for trace gas measurements. The use of data from these sensors informing policy action across Africa has been growing, but there still are limited documented examples of this impact. This is partly due to the need for accurate, reliable, and readily available data to make effective decisions for reducing air pollution. This session aims to review how policy makers can use/are using and interpreting LCS data for clean air action. In addition, the session aims to look forward towards what are future needs for sensor technology and supporting data to inform policy and regulatory actions.

## **Utilizing Communication Strategies to Increase Public Engagement on Air Pollution**

Air pollution is an important environmental health concern in Africa. As data and evidence becomes more readily available, it is crucial to increase public engagement and awareness and encourage action, both at the individual and societal levels. Effective communication strategies are essential to achieve this goal. Utilizing various communication strategies can help to raise awareness about the health impacts of air pollution and inspire people to engage and take action. These strategies can include social media campaigns, community outreach programs, and public education initiatives. Often, the information also needs to be accessible and easy to understand, using clear language and visuals. Importantly, the strategies also need to be tailored to specific audiences to ensure that they are effective.

## Mobilizing Resources to Support Air Quality Monitoring Research

One of the difficulties African scientists working on air pollution research encounter is the lack of laboratory and field equipment to generate reliable data essential for air quality policy formulation. Substantial investment in infrastructure, equipment, and personnel over the past few decades has led to significant improvement in air quality in the Global North such as Europe and North America. Therefore, the need for investment in equipment and trained personnel for air quality research both in the laboratory and field of the Global South cannot be overemphasized. However, air pollution is not yet a top concern for the governments of some Global South nations, leading to a lack of resources for this critical infrastructure.

**Goals of the Panel:** The goal of the panel is to discuss issues related to the acquisition and proper operation of equipment for air pollution research in African countries. Topics of interest include establishing good relationships with donors and suppliers; identifying the right equipment and understanding their operational requirements (supplies, maintenance, annual costs); ensuring the availability of trained personnel to install and operate the equipment; facility management; and operational sustainability.

[View the Current Program](#)



### Share your work!

Submit a presentation for consideration

If you are interested in sharing your work with our conference attendees in one of the above described sessions, please submit an abstract. General abstract submissions will be open through May 31st. Submissions will be reviewed by experts on the Conference Planning Committees in early June and acceptance notifications will go out June 21st.

Initially, Podium Presenters and Poster Presenters will need to reserve all three conference days. The conference schedule will be determined and announced to presenters July 15th. Please submit your abstract the system below.

[Submit a Presentation](#)

Of course, if you are interested in being a general attendee and learning from others, we welcome you to attend! [You can sign up here to stay informed.](#)



## How can you help?



**Air Sensors International Community**  
*International Connection Hub, Ghana*

**Become a Sponsor or Exhibitor!**

Share your technology & platforms with an engaged set of concerned air quality managers and advocates as an exhibitor or session sponsor.

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Contributions directly support travel scholarships for attendees

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ASIC Session Sponsors can introduce a session in-person or virtually

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Gold Level Exhibitors will have an opportunity to present to all conference participants.

**SPONSOR TODAY!**

October 17-19, 2023  
Hybrid Event, Accra, Ghana

Email: [sehall@ucdavis.edu](mailto:sehall@ucdavis.edu)

In order to ensure this conference reaches the right audiences and that this educational event accessible to the most people possible, *we could use YOUR help!*

**BECOME A SPONSOR:** We are providing travel and attendance grants to many attendees participating from African countries. Due to this we are asking for generous financial support from ASIC partners to make the event successful and ensure air quality improvements can continue to spread across the globe. We invite you to be a conference sponsor by supporting the planning efforts or travel of participants.

**Email Sandra Hall for details**

**BECOME AN OUTREACH PARTNER:** We also need to ensure all groups of people working on improving air quality in various African regions are informed of the conference and enrichment opportunities. We welcome you to share with your partner organizations the graphics below in emails or on social media.

Additionally, if you are partnering with an organization, government department or community group that is aiming to improve air quality in their region, please share their email to be added to this mailing list! You can forward this message or directly share their information with us at ASIC.



**Air Sensors International Community**  
*Advancing science and engaging communities*

The ASIC International Connection Hub's vision is to improve air quality by bringing together environmental managers, sensor developers, data analysts and air quality regulators, to discuss how to effectively use air quality sensors and the data produced to create massive changes in regulatory and personal actions to significantly influence air pollution levels.

Oral Presentations  
Poster Displays  
Air Quality Sensor Exhibit Hall

**JOIN OUR MAILING LIST TODAY!**

*Hear from local and international sensor experts who will be sharing their work, research, and expertise with attendees!*

October 17-19, 2023  
Accra, Ghana  
Join Virtually or In-Person

[asic.aqrc.ucdavis.edu/asic-ghana](http://asic.aqrc.ucdavis.edu/asic-ghana)



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**SUBMIT AN ABSTRACT TODAY**

Program Topics:

- Understanding Data
- Communicating Air Quality Data
- Community-based participation in using LCS
- Policy Management
- Sensors & Sensor Networks
- Air Quality Management
- Data Collection, Analysis & Interpretation
- Funding Development

October 17-19, 2023  
Accra, Ghana

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Questions? Please Contact the Conference Staff:  
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