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# IGACnews

facilitating atmospheric chemistry research towards a sustainable world

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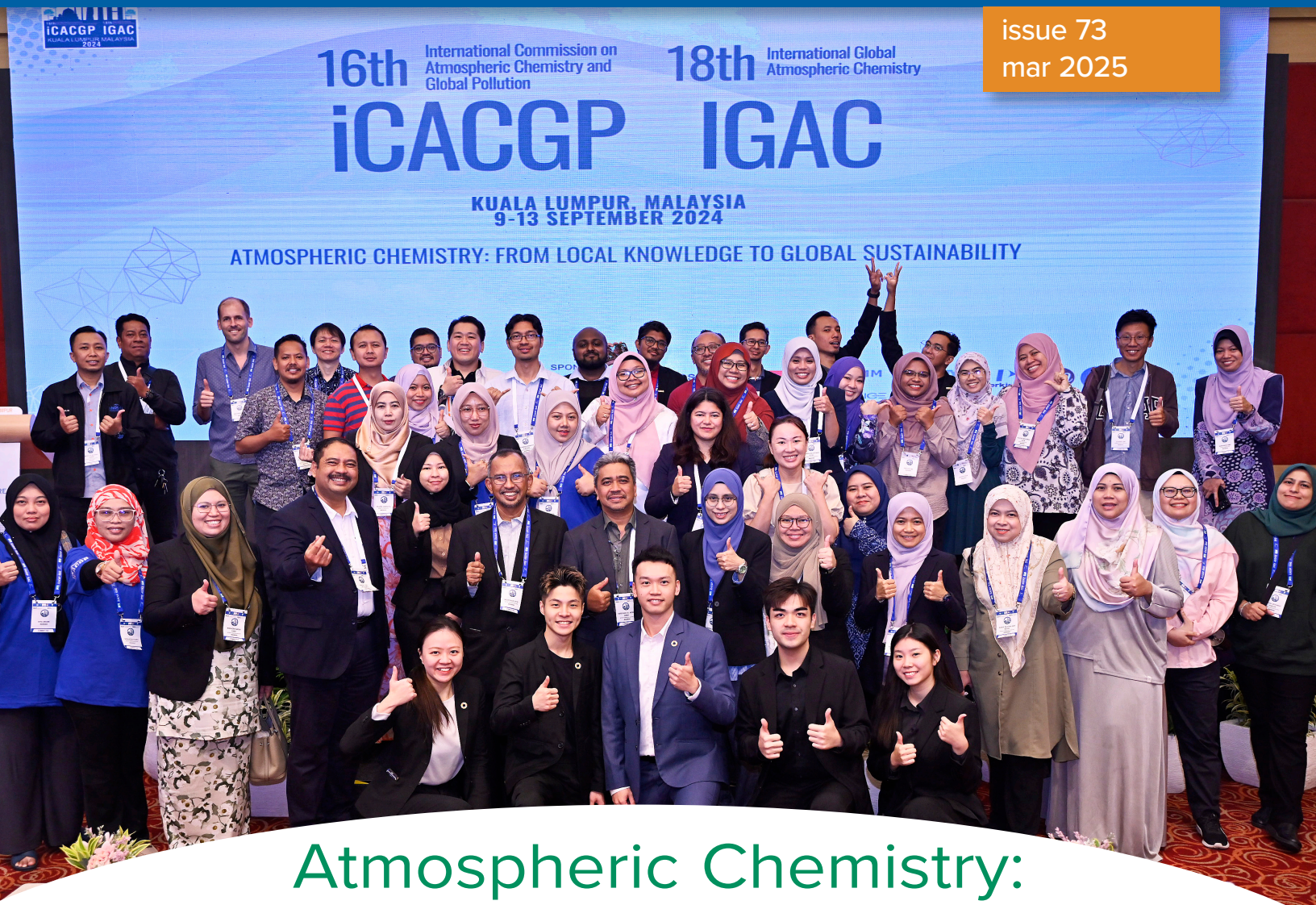


## Atmospheric Chemistry: From Local Knowledge to Global Sustainability Kuala Lumpur 2024

# contents





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**On the Cover**

*Participants of the 2024 iCACGP-IGAC Conference in Kuala Lumpur, Malaysia*

**Editor:** *Langley DeWitt*
**Design:** *Allison Gray*

*IGAC was formed in 1990 to address growing international concern over rapid changes observed in Earth's atmosphere. IGAC operates under the umbrella of Future Earth and is jointly sponsored by the international Commission on Atmospheric Chemistry and Global Pollution (iCACGP). The IGAC International Project Office is hosted by the Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado and is sponsored by the US National Science Foundation (NSF), National Oceanic and Atmospheric Association (NOAA), and National Aeronautics and Space Administration (NASA). Any opinions, findings, and conclusions or recommendations expressed in this newsletter are those of the individual author(s) and do not necessarily reflect the views of the responsible funding agencies.*

# letter from the editor

## 35 Years of IGAC Achievements

The IGAC Project has existed for 35 years now, officially becoming part of the International Geosphere-Biosphere-Programme (IGBP) in 1990, and later Future Earth in 2015 as IGBP ended. To celebrate this milestone, IGAC will have a special feature in Elementa highlighting its current working groups and activities, and recent achievements.

I have had the honor of being the IGAC Director for over four years now, only a small part of its history. One part of IGAC that always amazes me is how much work gets done within the community, despite IGAC only having one paid employee! I think it is a huge testament to how strong our community is, how passionate they are about their science, and how willing they are to lead collaborative initiatives in addition to their regular jobs. It amazes and inspires me every day.

It has been such a pleasure to see older activities continue in new directions and new activities emerge to answer developing scientific questions in atmospheric chemistry. It has also been rewarding to see regional networks group and connect people in neighboring countries doing similar science, with relatable barriers, comparable findings, and exciting possibilities. I have especially enjoyed watching the leadership of our recent Early Career Scientific Steering Committee take IGAC activities for early career researchers in new directions–virtual networking events, monthly skills and science seminars, outreach, and community-building online and at IGAC conferences.

Networking and community building can be difficult to quantify. What are the metrics and evaluation criteria for being the catalyst for people to meet, connect, build their networks, and later do science with this community? And yet I would argue that the value is priceless. Fostering community, a main tenant of IGAC, builds trust and a sense of togetherness that encourages people to remain in atmospheric chemistry. Recently, I asked on LinkedIn for some thoughts on how IGAC has shaped the careers of individuals, and received the below responses. Since IGAC is so community driven, I'll let them speak for how they perceive IGAC. And, I would love to hear from you about how IGAC has shaped your career and work! I think part of why IGAC works well is that we help make connections between scientists with an open and supportive atmosphere, but also allow ownership and leadership of activities, working groups, and the early career committee to be firmly in the hands of the volunteers (with IGAC support).

**Kwabena Fosu-Amankwah (PhD)**
**Atmospheric Aerosols Research Scientist**

*The exposure IGAC-24 conference offered me has put me on a new pedestal in the international atmospheric chemistry community. It has expanded my network and given me boundless opportunities to collaborate with like minds.*

**Dr. Imran Shahid**
**Research Associate Professor at Qatar University**

*Since 2011 after my PhD I am involved in IGAC and related activities ACAM, I received training and travel award from IGAC and I have served as a member of IGAC EC-SSC, IGAC supported me throughout my career and provided guidance / interaction with global experts in the field. I have attended IGAC meeting in Japan and ACAM in Nepal and Bangkok*

**Sebastian Diez**
**Air Pollution Researcher**

*IGAC has been a catalyst for many individuals from modest backgrounds, helping them overcome obstacles and persevere in their scientific careers. In my case I think without IGAC's support I would likely be pursuing a completely different path. IGAC is definitely for me a turning point. My first international conference (IGAC Natal 2014), inspired many young researchers (including those from LAECESS and myself), to focus on the needs of the communities we come from and which we could influence.*

*Also, IGAC has created a space for developing leadership skills and expanding scientific perspectives, giving a leading role to early career researchers. As a Latin American, IGAC has been instrumental in strengthening connections among scientists in the region, providing a platform for collaboration and knowledge sharing.*

*The IGAC community has taught us that we are not alone, it is extraordinary and continues to be a constant source of support and motivation.*

# letter from the editor

**Victor Dzidefo Ablo**
**Lead, Clean Air One Atmosphere | Air Quality Monitoring & Advocacy | Geography Educator - Salvation Army Senior High School, Akim Wenchi, Eastern, Ghana**

*IGAC, introduced to me by Shahzad Gani, gave me a unique opportunity to share our work and network with others in the field. Through this network and training opportunities, I have learned/learning more in the field, which was totally new to me a few years ago.*

*I'm looking forward to more opportunities to learn and share ideas.*

**Pravash Tiwari**
**PhD Ongoing : Environment Engineering**

*I first learned of the International Global Atmospheric Chemistry (IGAC) Project when I attended the 2019 ACAM meeting, where I gained a real understanding of its mission. I still remember, the training workshop at the conference was particularly impactful. It wasn't a typical training; it was an exercise in collaboration, bringing together researchers from diverse backgrounds to solve problem. This was my first training on handling satellite datasets, and it so much boosted my confidence, I am now pursuing a PhD in satellite remote sensing of aerosols and working on developing regional products. I frequently get in touch with young students and help them in their projects involving processing and analyzing satellite and reanalysis datasets. I made some really good friends back in ACAM 2019 meeting and we are still in touch, sharing our research progresses and collaborating.*

*As a noteworthy development, I have recently joined in as an Early Career Scientist Steering Committee (ECR SSC) member, inspired to contribute to IGAC's goals.*

**Akash Vispute**
**1st, Project Scientist at IITM Pune | Data Analyst | Geek**

*Hi all,*

*I'm Akash from India, originally from a physics background, now working in Atmospheric Chemistry, studying aerosol pollution using HR-TOF-AMS. Before IGAC Malaysia 2024, I struggled with self-doubt after being rejected for IGAC and DST-SERB funding. I questioned whether my research was significant enough. My supervisor, Dr. Sachin Ghude, encouraged me to stay motivated, and with his support, I attended my first international conference.*

*IGAC 2024 was a turning point—interacting with global experts helped me realize the real-world impact of my work on air quality, climate, and public health. It gave me new energy and perspective to explore this field further. Winning an award in the poster session reinforced my commitment, pushing me to work even harder.*

*The IGAC community has been truly inspiring. Engaging with such a brilliant network made me realize the importance of my research, not just for science but also for society. I'm deeply grateful to the organizers for this platform!*

**IGAC DIRECTOR**

**Langley Dewitt** facilitates international collaboration on atmospheric chemistry to advance the field towards a sustainable world. She also coordinates regional working groups in areas with a growing field of atmospheric chemistry to develop intraregional networks and connect scientists in these regions to the global scientific community. Langley has worked as a consultant air monitoring specialist for industry in the Houston area, helped establish a climate observatory and air quality monitoring network in Rwanda, and worked on air quality and tropospheric atmospheric chemistry issues in France and the US. Her PhD is from the University of Colorado, Boulder in Analytical and Atmospheric Chemistry, with a focus on astrobiology, and her B.S. is from Furman University in Chemistry and English.

# Updates on the IGAC SSC

At the close of 2024, we said goodbye to Professor Clare Murphy of the University of Wollongong. She served as IGAC co-chair for the past four years and we will miss her strong leadership, creative problem solving, and enthusiasm greatly!

We also say goodbye to Dr. Lisa Emberson, University of York. We will miss your impactful sustainability-minded contributions!

Dr. Owen Cooper, NOAA scientist, will join current co-chair Professor Abdus Ssalam as our next co-chair. IGAC looks forward to your guidance, expertise in getting things done, and leadership these next few years!

## *Goodbye...*

Outgoing SSC-chair Professor Clare Murphy

Outgoing SSC member Dr. Lisa Emberson

**Dr. Owen Cooper** received his undergraduate degree from the Gillings School of Global Public Health at the University of North Carolina, Chapel Hill, and his Master's and PhD from the Department of Environmental Sciences at the University of Virginia. Since 2001 Owen has supported the mission of the NOAA Chemical Sciences Laboratory through his work as a research scientist at the Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado Boulder, and now as a federal Research Physical Scientist. With the goal of conducting scientific research that is highly relevant to public health and policy development, Owen's interests pertain to: trends in U.S. and global air quality; the global tropospheric ozone budget and trends; and the impact of climate change on air quality. Owen is an author on over 130 peer-reviewed publications and has contributed to several assessment reports including the fifth and sixth IPCC assessment reports, the annual State of the Climate Reports, and the Task Force on Hemispheric Transport of Air Pollution. In 2014 he established IGAC's Tropospheric Ozone Assessment Report (TOAR) and has continuously served in TOAR leadership roles.

We also welcomed two new members to the IGAC SSC, Kathryn Emmerson and Rami Alfarra!

**Dr. Kathryn Emmerson** is a principal research scientist at Australia's national science agency, the CSIRO. She gained a PhD in atmospheric chemical modelling from Lancaster University in the UK, specialising in the gas to particle partitioning of organic hydrocarbons. She has experience developing chemical models of all scales – box models, regional and global models. She did a postdoc

# ...Hello

New SSC co-chair
Dr. Owen Cooper

New SSC member
Dr. Kathryn Emmerson

New SSC member
Dr. Rami Alfara

modelling radical formation chemistry at the University of York, before implementing a stratospheric sulfur scheme to the UK chemistry and aerosol (UKCA) model at Leeds University. She moved to Australia in 2011 to take up an air quality modelling position at CSIRO.

Kathryn is now a leader in the field of Australian biogenic emissions modelling. She developed the Australian version of the Model of Emissions of Gases and Aerosols from Nature (MEGAN), suited to the high biogenic emissions from Eucalyptus trees. Given their high ozone forming potential, she is studying how these biogenic emissions will increase in a warming climate. Kathryn also led the development of the Victorian grass pollen prediction system which assists the government in assessing thunderstorm asthma risk. She is a lead author of Australia's federal "State of the Environment" report, and is a spokesperson for Australian air quality issues.

**Dr. Rami Alfarra** is the Air Quality Lead and acting director of the Environment Center at Qatar Environment and Energy Research Institute (QEERI) at Hamad bin Khalifa University (HBKU) in Doha, Qatar. He has over two decades of international experience in atmospheric aerosols and their impact on air quality, climate change, and human health. Dr. Alfarra leads applied research close to the interface between science and policymaking focusing on air quality assessment, sources, and atmospheric processes of air pollution and their human health impacts in urbanised arid regions.

Dr. Alfarra completed a PhD degree in atmospheric science at the University of Manchester in the UK in 2004, worked as a post-doctoral scientist at the Laboratory of Atmospheric Chemistry at the Paul Scherrer Institute in Switzerland from 2005 to 2008 and a scientist at the UK National Centre for Atmospheric Science (NCAS) and Fellow at the University of Manchester from 2009 to 2021. He contributed to more than 40 major national and international research collaborations and has more than 80 publications. Rami received the 2008 Swiss Academy of Sciences Atmospheric Chemistry and Physics Award.

# 2024 iCACGP-IGAC Conference Recap

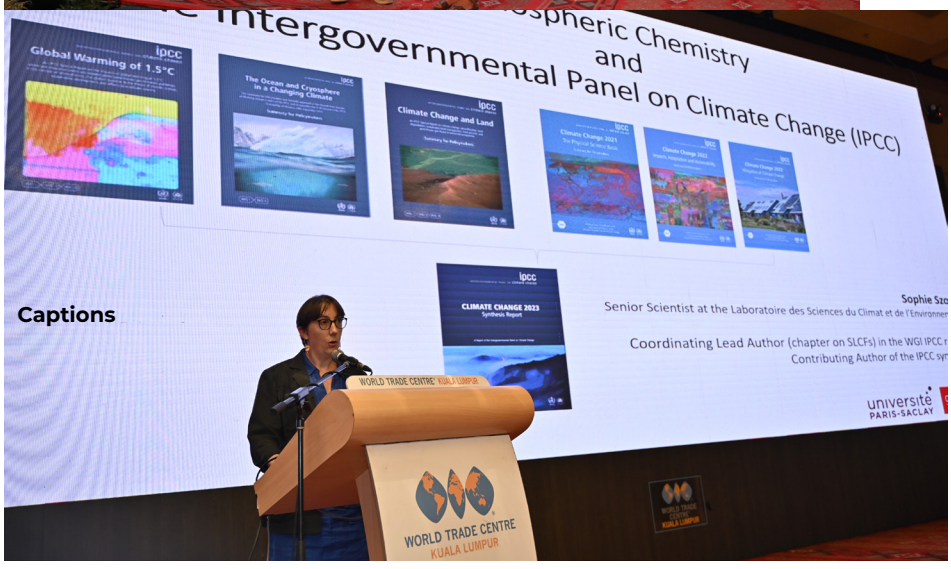
**By Professor Mohd Talib Latif**

The iCACGP-IGAC 2024 Conference was held at the World Trade Centre Kuala Lumpur from September 9 to 13, 2024. Four hundred sixty-six scientists attended the conference, and five hundred fifteen paid registrants were among the six hundred sixty-six registered individuals. Researchers from forty-six nations participated. Malaysia (106), the United States (51), and the United Kingdom (42) recorded the highest participant counts. During the meeting, 55 oral presentations and 414 poster presentations were delivered. The conference has effectively convened atmospheric chemistry researchers globally to deliberate on subjects pertinent to the theme, Atmospheric Chemistry: From Local Knowledge to Global Sustainability.

Young Scientist programs are one of the conference's main focuses. Before the conference, an Early Career Short Course involving 40 participants was conducted in


iCACGP-IGAC 2024 Conference participants






**Captions**

**Top: IGAC co-chair Professor Clare Murphy gives the closing address**

**Middle: Dr. Georgios Gkatzelis receives the Paul Crutzen early career award from iCACGP**

**Bottom: Dr. Sophie Szopa gives a keynote address**

Putrajaya, an administrative area of the Malaysian government. Early career programs were conducted daily during the conference to give young scientists opportunities to interact with their peers, and senior scientists and experts attended the conference. This is to ensure the continuity of atmospheric chemistry from young scientists who can work together and collaborate in these exciting research fields. The iCACGP-IGAC Conference also rewards excellent researchers through the Paul J. Crutzen Award. This year, the winner of this award is Georgios Gkatzelis from Forschungszentrum Jülich, Germany.

Research communities and networking groups worldwide have taken the opportunity to organise side meetings and meet-up sessions during the conference. Among others are the African Group on Atmospheric Sciences (ANGA), Monsoon Asian and Oceania Networking Group (MANGO) working group, Atmospheric Composition and the Asian Monsoon (ACAM), Biomass Burning Uncertainty: ReactioNs, Emissions, and Dynamics (BBURNED), Integrated Land Ecosystem-

Top: Local Organizing Committee at tea time

Middle: Excursion to the Islamic Arts Center

Bottom: One of the exhibitors showing his products to conference attendees.

Atmosphere Process Study (iLEAPS), Small Sensors for Atmospheric science (Allin-Wayra), Urban Air Pollution and Interaction with Climate (U-APIC), The Aerosol Chemistry Model Intercomparison Project Phase 2 (AerChemMIP2) and Tropospheric Ozone Assessment Report, Phase II (TOAR-II). All exhibitors also have the opportunity to promote their products during the conference.

Overall, the conference has contributed to the advanced knowledge of atmospheric chemistry and air quality research. The information presented during the conference can be used by policymakers, especially in Malaysia and Southeast Asia, to improve the air quality in this region. The conference is expected to contribute toward future collaboration among scientists from different areas. This will contribute to a better understanding of atmospheric chemistry for the benefit of humans and global sustainability.

# Fire UNcertainty: CHemistry, Emissions, and Modelling (FUNCHEM) 2024 workshop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**Rupal Ambulkar**
Indian Institute of Tropical Meteorology, India

**Yang Li**
Baylor University, USA


**HOSTS**

**FUNDING**

**PARTICIPANTS**

This hybrid workshop had about 35 people attend virtually and about 25 people attend in person. This was a global meeting that included participants from:

**Australia, Bangladesh, Brazil, Bolivia, Japan, Canada, China, Colombia, Cyprus, Ethiopia, Fiji, Finland, France, Greece, Hong Kong, India, Indonesia, Ireland, Ivory Coast, Malaysia, Netherlands, Norway, Switzerland, Taiwan, Thailand, UK, USA.**

**BACKGROUND**

Biomass Burning Uncertainty: ReactioNs, Emissions and Dynamics (BBURNED) is a new IGAC activity that aims to better quantify the current understanding of the uncertainty and variability in biomass burning emission estimation, and determine how to more accurately represent atmospheric chemistry resulting from fire.

**FUNCHEM participants**

Biomass Burning Uncertainty: ReactioNs, Emissions and Dynamics (BBURNED, an IGAC activity), and integrated Land Ecosystem-Atmosphere Processes Study (iLEAPS, a Future Earth global research network) co-organized the two-day FUNCHEM hybrid workshop to discuss the latest research on uncertainties and variability in biomass burning emissions, chemistry, and modelling. The goal was to determine future directions and collaborative opportunities, and to make decisions on the launch of an inter-journal special issue. The workshop was held immediately after the iCACGP-IGAC conference in Kuala Lumpur, Malaysia on 14 and 15 September, 2024.

The joint BBURNED-iLEAPS FUNCHEM workshop was a successfully interactive hybrid meeting that summarised current high-profile research topics related to biomass burning and atmospheric chemistry. The meeting identified research gaps, opportunities to address those gaps, and future directions for providing valuable results for those who study biomass burning impacts on climate, health, and ecosystems. With community input gathered at the workshop, we will proceed with an inter-journal special issue proposal on biomass burning uncertainties in the near future.

FUNCHEM brought together experts in biomass burning (BB) research to communicate ongoing research regarding uncertainties from BB emission estimation, chemical processes, and modelling; identify research gaps; and how to proceed with disseminating current research, as well as target future directions. The workshop was arranged in four half-day sessions:

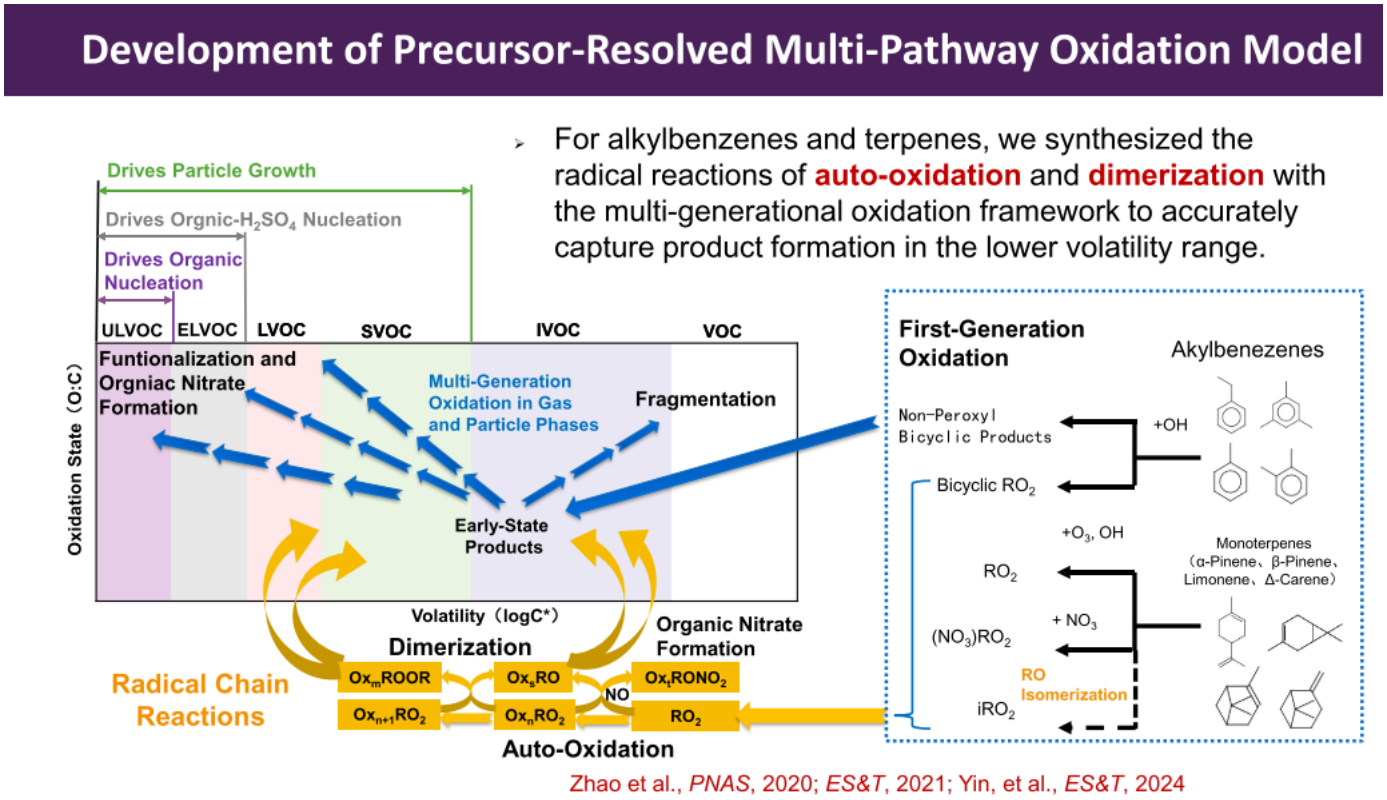



**FIGURE 1.** Schematic presented by Shuxiao Wang, illustrating the development of a model simulating the oxidation and evolution of VOCs with varying volatility.

the first three covering the themes of the working groups on emissions, chemistry (Day 1), and modelling; plus a final session for breakout discussions (Day 2). The breakout discussions focused on future research directions for addressing BB research gaps and user community needs for BB-related impacts (e.g. policy, climate change, health, and agriculture). The main deliverable from the information gathered at FUNCHEM will be an inter-journal special issue in the near future.

### Session 1: Emissions

A slew of BB emissions products have been developed by different research groups and they vary by a factor of 3-10 due to different sources of uncertainties from varying inputs used in the algorithms. The Emissions session focused on presentations ranging from emerging algorithms that utilize unique satellite observations such as visible light energy that can distinguish between flaming and smoldering fires, identifying large species specific errors in BB emissions, and unique applications. Reports on the impact of crop residue burning on regional air quality and anomalies in greenhouse gas emissions from fires that offset gains made from reductions in anthropogenic emissions were noteworthy. As the community prepares to minimize BB emissions errors, it was noted that most algorithms miss emissions from peat fires due to satellites' inability to detect fires burning below the surface. Leading experts in this research area participated in a panel discussion with a specific focus on transitioning from using fire information from MODIS to VIIRS, due to the imminent decommissioning of MODIS instruments. Use of VIIRS and geostationary observations is set to improve global satellite coverage and spatial resolution, but introduces new issues such as stepwise changes to long term emission records and how to correct the results using knowledge of the different pixel size and atmospheric path observations.

### Session 2: Chemistry

Incomplete understanding of chemical processes undergone by BB emissions, whether in the gas or particle phase, is another major source of uncertainties. Talks in

**FIGURE 2:** In-person participants during one of our breakout discussion sessions.

this session detailed work done to address literature gaps such as quantifying the amount of VOCs produced by wildfires, the influence of VOC composition on SOA formation, the effects that BB aerosol ageing can have on their interactions with clouds, the effects of anthropogenic oxidants on plume evolution, and characterising the toxicology of gaseous emissions from aged smoke. The prevailing theme from this session is that a large amount of chemistry-related uncertainty derives from the vast diversity of species emitted by BB and the chemical reactions they undergo, highlighting the need for comprehensive measurements of smoke composition and their evolution.

### Session 3: Modelling

BB uncertainties can arise from the ways fires and their emissions are represented in models, including the estimation of fire intensity, the characterization of emission factors, the treatment of plume rise, and the incorporation of chemical and physical transformations of smoke gases and particles. This session featured talks on the outcomes of using different BB emission datasets in a single chemical transport model, simulating fires and climate change interactively in an Earth system model, the impact of including smoke radiative feedbacks on temperature forecasts in an air quality and weather forecasting model, and how modelling results can inform health risks and air quality management decisions. The broad range of BB issues across diverse modelling approaches was concisely represented in this half-day modelling session!

### Session 4: Breakout discussions

The final session of FUNCHEM consisted of breakout discussions, starting with identifying gaps in BB research. Many of the topics resulting from these discussions can be found in the Jamboard in Figure 3. Following that, discussions revolved around the wider effects of BB such as health, policy, and the effects of BB emissions on the oceanic biogeochemical cycle. For instance, the net benefit of planned burns was a subject of debate, as prevention of future wildfires are traded off with the release of emissions; while from a health perspective, the urgent need for cohort studies in different population groups was highlighted. The collaborative study between BB people and oceanographers, such as by involving experts from the BBURNED and the SOLAS communities, could be one future direction. Finally, the workshop closed by discussing the planned BBURNED inter-journal special issue;

What are some gaps in BB research that need addressing?


**FIGURE 3:** In person and online breakout discussions were captured in our jamboards.

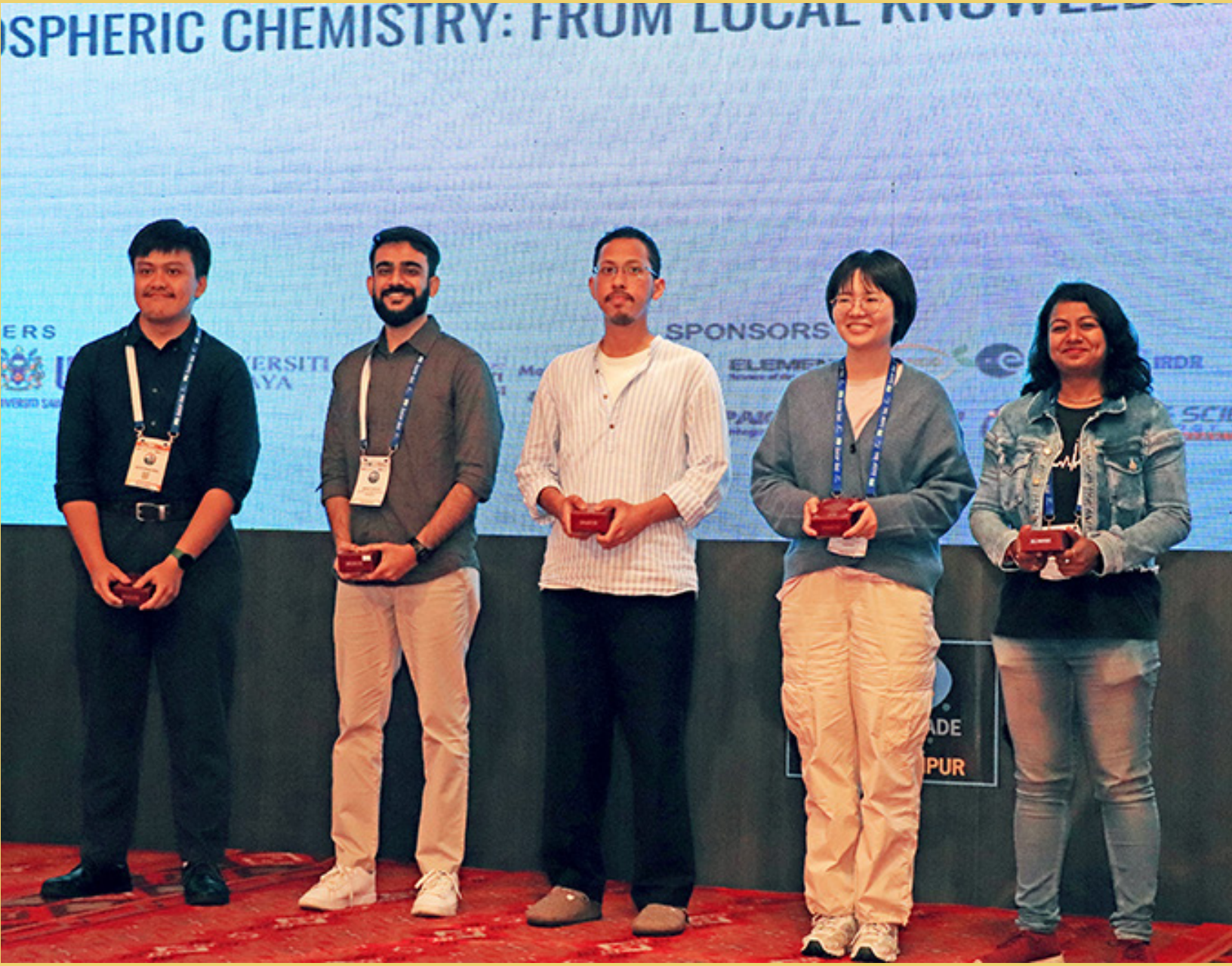
manuscripts will contribute to constraining BB uncertainties relating to the three working group topics. In identifying the family of journals to publish the special issue, the importance of balancing open access journals and the cost of publication (particularly as submissions to the special issue will include institutions from lower-income countries) was highlighted.

**The FUNCHEM webpage: https://www2.acom.ucar.edu/bburned/workshop-2024-fire-uncertainty**

**FUNCHEM recordings are being uploaded to this youtube playlist: https://youtube.com/playlist?list=PLFfqdSGCs4_QNNQHrh_vxzPjG_YhZRFdJ&si=7A8-yv1Oom3XvGYY**

*Please stay tuned for more information about the inter-journal special issue!*

# early career spotlight




From left to right, early career scientist poster prize winners Keith Noni, Akash Sagar Vispute, Farhan Nursanto, Jiaru Li, and Priyanka Srivastava

## IGAC profile

# Jiaru LI

**Where are you from?**

I am Jiaru LI from China, and I am now living and working in Japan.

**Where did you receive your undergraduate and graduate degrees and in what subjects?**

I received my undergraduate degree at Shanghai Jiao Tong University in China and MSc and PhD degrees at Kyoto University in Japan. My background is Atmospheric Chemistry with a specialty in the detection of HOx radicals.

**Where and what is your current position?**

I am currently a visiting researcher at Tokyo Metropolitan University and National Institute for Environmental Studies in Japan.

**What is your current area of research?**

I had several experiences in field observations in urban/suburban/coastal regions in Japan, focusing on the investigation of gas-phase HOx life cycle, quantifying the unknown/undetectable trace species, and evaluating the relationship between HOx cycle and ozone production. I am also interested on the multi-phase HOx processes aiming at the interaction between $HO_2$ and aerosol particles, and now I am working on investigating the aerosol properties' influence on $HO_2$ uptake.

**What did you like best about the 2024 iCACGP-IGAC conference? What would you like see changed in the future?**

The 2024 iCACGP-IGAC in Kuala Lumpur was my first on-site conference. I was impressed by the strong support for Early-Career researchers (ECRs) including financial aid, workshops, and networking for ECRs. Thanks to the IGAC Japanese community, my registration fee was covered, enabling my attendance. I was also inspired by the focus on air quality research in less-studied areas such as African countries. iCACGP-IGAC is a community that genuinely cares for the future. I look forward to seeing more cross-border researches as well as interdisciplinary projects emerge from the IGAC platform.

**What and/or who motivated you to pursue a career in science and more specifically in atmospheric chemistry?**

In 2012, I went to the megacity Shanghai from a small town in Southeastern China for undergraduate studies, however, I experienced severe air pollution in Shanghai. The Clean Air Action was launched one year later in China. This exposure made me wonder how I could contribute to addressing such issues, motivating me to pursue graduate studies and a career in atmospheric science.

**What challenges have you faced as an early career scientist during Covid?**

The timeline of my PhD was divided by COVID: the first half was before the pandemic, and the second half was during it. Fortunately, COVID didn't bring major difficulties to my research in Japan; I was even able to participate in two field observations during this period. However, COVID changed my personal life profoundly.

I vividly remember a Sunday morning in the spring of 2021, just a few months before my defense. My supervisor, who had been a strong source of support, encouraged me to return to China after hearing that my grandfather's lung cancer had worsened. That journey home was transformative. I went through waves of anger, hopelessness, acceptance, and heartbreak. In the end, I emerged stronger. I know all other challenges become less daunting because I had gained a deeper resilience and empathy through that experience. I know that the purpose of science should not be isolated from life's broader context. This experience will always bring me strength and courage to face future obstacles, both in life and in my career.

## IGAC profile

# Priyanka Srivastava

**Where are you from?**

New Delhi, India

**Where did you receive your undergraduate and graduate degrees and in what subjects?**

Bsc. (Hons) Physics University of Delhi, Delhi, India

Msc. Physics Banasthali Vidyapith, Rajasthan, India

PhD thesis title-Carbonaceous Aerosols over the Himalayas under ISRO-ARFI Project, from ARIES and University of Delhi, Delhi

**Where and what is your current position?**

Scientist at Aryabhatta Research Institute of Observational Sciences (ARIES), Nainital, India

**What is your current area of research?**

Trace gases and aerosols over the Hiamlayas

**What did you like best about the 2024 iCACGP IGAC conference? What would you like see changed in the future?**

Early Career Short Course Program and ample opportunities to discuss with senior and contemporary researcher was the best part of 2024 IGAC.

It would be good to have a IGAC forum may be on slack or any other platform where all the community members can share their research and opportunities as they come up and it can also have working groups which can continue their discussions

**As an early career scientist, you have an exciting future ahead of you. What type of career and topic do you hope to be working on in 5 or 10 years from now?**

Vertical profile of the aerosols and trace gases transported to the Himalayas has large climatic impacts regionally but little research is done in the context. My research will be directed in understanding the role of this vertical pollutant distribution in changing the climate and hydrological cycle of the region. Anyone with common interest is welcome to join.

**If you have been to IGAC science conferences, what was the most interesting thing you learned and who was the most interesting person you met?**

IGAC is a great platform for meeting renowned researchers and discussing our ideas with them. Also, it gives a chance to collaborate and conduct research together which is not possible otherwise. As for me, I was fortunate to meet my post doc mentor Dr. Hiroshi Tanimoto during IGAC.

**To you, what is the ultimate goal of science? Does this goal have anything to do with why you became a scientist?**

For me the goal of science on one side is to answer our natural curiosity to different processes in the environment. The second goal is to advance the human lives through technical advances. Both these were essentially the driving factors in my career choice.

## IGAC profile

# Farhan Nursanto

**Where are you from?**

I grew up in Jakarta, the bustling capital city of Indonesia in Southeast Asia. In terms of culture, I grew up in a household with cultures from East Java, Yogyakarta, and Aceh – places where my parents' heritage is originally from.

**Where did you receive your undergraduate and graduate degrees and in what subjects?**

I pursued a bachelor's degree in chemistry at the Bandung Institute of Technology, Indonesia, where I did environmental water sample analysis for my bachelor's thesis. My interest in environmental science motivated me to pursue a master's degree in environmental analytical chemistry at the University of Strasbourg, France. I focused on air pollution analysis, conducting analyses of PAHs in particulate samples for my thesis.

**Where and what is your current position?**

The subject I studied highlighted to me the extent of pollution, especially air pollution, and its impact on our health. It encouraged me to pursue a doctoral program in atmospheric science at Wageningen University & Research in the Netherlands, where I am currently doing now.

**What is your current area of research?**

Currently, my research focuses on understanding the sources and sinks of nitrate aerosol, addressing the emerging political and environmental issue of excessive nitrogen deposition in the Netherlands.

**What did you like best about the 2024 iCACGP IGAC conference? What would you like see changed in the future?**

I find that 2024 iCACGP IGAC conference really brings diversity of thought processes, insights, and research cultures from different parts of the world. I have not seen such thing in other conferences where the research topic is very focused on the Global North countries.

With a large crowd attending the conference, I think it would be great to have a longer time for the conference or parallel sessions taking in place, so more interesting talks and posters can be visited during the event.

**If you have been to IGAC science conferences, what was the most interesting thing you learned and who was the most interesting person you met?**

My highlight for 2024 iCACGP IGAC conference is the presentation of ASIA-AQ campaign by James Crawford from NASA Langley. This campaign is exactly the example of what I expected as a holistic

**What and/or who motivated you to pursue a career in science and more specifically in atmospheric chemistry?**

Degradation of air quality is a serious problem that affects human health and ecosystems globally. Good air quality is very important as it would deliver benefits to the public welfare and the environment, and therefore needs to be monitored and assessed. Throughout my studies, environmental chemistry has been the subject that sparks the most of my interest. Growing up in Jakarta, witnessing firsthand the harmful effects of pollution ignited that interest, which ended up becoming more specific towards atmospheric chemistry. The atmosphere is an important aspect for humans and other species as their existence depends on its condition and we cannot choose the air we breathe. I see atmospheric chemistry as a tool to understand how our environment works and to protect it from degradation in the face of human activities.

**What do you think is the largest challenge in pursuing a career in science?**

I realized the important role atmospheric science plays in addressing societal challenges, which require collaboration across various disciplines. Therefore, I think the largest challenge for us as scientist is to make sure that each component of the society – scientists, policymakers, and citizen – communicate with each other in a holistic manner so our goal to solve environmental issues can be achieved for better quality of life.

**What do you enjoy most about your work? Is it in the lab, writing papers, doing field research or in front of a crowd giving a talk on your research?**

The most exciting part of the research is when you can interpret and make sense of the

data you are working with. It is one step further to implement what you have studied to a societal cause. I am still in the learning process, and being able to explain our surroundings using atmospheric science as tool is an accomplishment for me.

IGAC profile

# Akash Sagar Vispute

Ph.D. Student, Department of Physics, Savitribai Phule Pune University, and

Indian Institute of Tropical Meteorology, Pune, India-411008

**Where are you from?**

I am from Chopda, a small town in the Jalgaon district of Maharashtra, India. Since I started my undergraduate studies, I've been living in Pune, a lively city known as the "Oxford of the East" for its educational institutions and one of India's biggest IT hubs. Pune has even been recognized as India's most livable city several times, so it's been a great place to live and study.

**Where did you receive your undergraduate and graduate degrees, and in what subjects?**

I completed my Bachelor of Science (B.Sc.) in Physics at Fergusson College in Pune. After that, I went on to do my Master of Science (M.Sc.) in Physics at Modern College, Shivajinagar, which is affiliated with Savitribai Phule Pune University.

**Where and what is your current position?**

I am currently pursuing a Ph.D. in Physics at Savitribai Phule Pune University. My research work is based at the Indian Institute of Tropical Meteorology (IITM), Pune, as part of the WiFEX project. I am supervised by Dr. Suresh Gosavi, Hon. Vice-Chancellor of Savitribai Phule Pune University, Dr. Sachin Ghude, and Dr. Gaurav Govardhan, Senior Scientists at IITM, Pune.

**What is your current area of research?**

My research is focused on the chemical and physical characteristics of atmospheric aerosols, specifically fine particulate matter.

I use High-Resolution Time-of-Flight Aerosol Mass Spectrometry (HR-ToF-AMS) to study aerosols in real-time.

I work on source apportionment using Positive Matrix Factorization (PMF) to monitor environmental impacts.

Additionally, I am involved in WRF and WRF-Chem models for air quality predictions and refining models, incorporating observational data to make them more accurate.

**What did you like best about the 2024 iCACGP IGAC conference? What would you like see changed in the future?**

The 2024 iCACGP IGAC conference was amazing, especially because of the diverse topics and the different interesting sessions. It was inspiring to connect with researchers worldwide and learn about their work in atmospheric chemistry, air quality, and new experimental methods. Conversations with leaders in the field gave me fresh ideas for my own research.

For future conferences, I think it would be nice to make the sessions a bit more interactive and engaging. Also, as a vegetarian, I'd appreciate a wider variety of vegetarian food options. I know it sounds a bit crazy, but it's hard to focus when you're hungry!

**What challenges have you faced as an early career scientist during Covid?**

When COVID-19 lockdowns started in India, I was stuck in Pune, and I found myself facing various challenges. Staying alone in my rented apartment in Pune, I had to manage with limited food stock and handle daily tasks that I wasn't used to, like cooking. Slow internet frequently interrupted my work, and since my research involves instrument-based observations, I had to go to the office occasionally to check the instruments, which increased my anxiety about exposure to COVID-19. Despite these challenges, I was able to collect aerosol chemistry data of PM1 during the COVID-19 period through HR-ToF-AMS. Looking back, it was tough, but overcoming these challenges gave me a unique learning experience.

**As an early career scientist, you have an exciting future ahead of you. What type of career and topic do you hope to be working on in 5 or 10 years from now?**

I aspire to become a scientist specializing in atmospheric sciences, ideally working on projects that combine Physics, Chemistry, and Astrophysics. In 5 to 10 years, I hope to research aerosol evolution at a detailed elemental level and expand this knowledge to understand atmospheres on exoplanets as well.

**If you have been to IGAC science conferences, what was the most interesting thing you learned and who was the most interesting person you met?**

Attending the 16th iCACGP Symposium and 18th IGAC Science Conference in Kuala Lumpur, Malaysia, was an incredible experience, especially as it was my first IGAC science conference. I learned so much about new research in atmospheric chemistry, especially about SOA formation and its impact on air quality, including some very innovative experimental approaches. I met several pioneers in the field, but Dr. James Crawford was especially memorable. He was not only interactive, friendly and approachable nature but also for his sense of humour; he even joined us in singing and dancing during the conference dinner! Dr. Owen Cooper was also great to meet; both of them took the time to listen to my research findings during the poster presentation session and gave me valuable feedback.

**How did you become part of the IGAC community and do you think as an early career scientist IGAC workshops and conferences will aid or have aided you career as a scientist?**

I joined the IGAC community through the recommendation of my mentor, Dr. Sachin Ghude, and senior colleagues. IGAC workshops and conferences are incredibly beneficial, especially for early-career scientists, as they provide a platform to present research, receive feedback, and establish connections with experts in atmospheric science.

**Is there a goal or dream that you are trying to accomplish as a scientist?**

Yes, my dream is to do fundamental research that can explain the mechanisms behind how different aerosols evolve at the elemental level and how they impact the entire atmosphere on Earth. I'd love to apply these insights to understand atmospheres beyond Earth too, especially those of exoplanets!

**Is there an element or aspect of your research you believe to be particularly important?**

Patience and consistency are essential elements in research. Mental health and support from family and my guide are also crucial, as they help keep me motivated, especially during challenging times.

**Outside of science, what are some of your other interests/hobbies?**

Outside of science, I love travelling and learning about different cultures. I'm also a big fan of trekking and have hiked up about seven forts around Pune

so far. I enjoy exploring new gadgets and tech, and my favourite games are Pokémon Go, Badminton, Cricket and chess.

**Pursuing or earning a doctorate degree in the field of atmospheric chemistry is not an easy task. What challenges have you had to overcome to get to where you are now?**

Doing a Ph.D. in atmospheric chemistry is challenging, especially since my research depends heavily on sophisticated instruments like the HR-TOF-AMS. The instrument setup is remote, so when issues arise, I have to travel there to troubleshoot, which can be time-consuming and exhausting. Data quality control, software for preprocessing, and programming skills are essential, and managing all these requires meticulous attention to detail. Patience and consistency have been key in overcoming these challenges. After 4.9 years, I feel more confident in handling these tasks and taking them in stride.

**To you, what is the ultimate goal of science? Does this goal have anything to do with why you became a scientist?**

For me, the ultimate goal of science is to understand the universe—how it works and everything within it. This curiosity is exactly what inspired me to pursue a career as a scientist. My research journey reflects this drive: my B.Sc. thesis was on Solar Physics, my M.Sc. thesis focused on the relationship between star formation and active galactic nuclei feedback in Astrophysics, and my Ph.D. research now explores Atmospheric Chemistry and Physics. Yes, my goal is to unravel the workings of the universe!

**Was there an event, influential individual or childhood dream that lead you to become a scientist? If not, what lead you to pursue a career in science?**

When I was 13, during a summer vacation at my grandmother's place, my uncle, Mr. Prafull, was reading about black holes and shared some of their mysteries with me. I was fascinated by these celestial objects. Later, we visited the Nehru Planetarium in Mumbai, where I watched my first planetarium show, which sparked even more curiosity about the universe. Soon after, I read "Akashashi Jadale Nate" by Dr. Jayant Narlikar, which deepened my interest in science. I continued reading science and technology books and watching sci-fi movies, realizing how science could help address challenges on our planet and the environment affected by human activities. Through public talks and presentations on science, I developed a passion for understanding and communicating scientific knowledge. This journey is what inspired me to pursue a career in science and ultimately become a scientist.

**What advice can you offer to those just starting a masters or PhD program in atmospheric chemistry?**

Be consistent and patient. Atmospheric chemistry is complex and requires a solid understanding of both physics and chemistry. Take time to understand the instruments, and keep learning new data analysis techniques. Also, don't hesitate to reach out to senior researchers; their experience is invaluable.

**What and/or who motivated you to pursue a career in science and more specifically in atmospheric chemistry?**

My interest in atmospheric science developed from a mix of personal influences and my fascination with understanding complex natural phenomena. My uncle's interest in black holes, along with books by Dr Jayant Narlikar, sparked my curiosity about the universe and how Venus lost its atmosphere. As I progressed in my education, I became deeply aware of issues related to air quality, climate change, and their impact on human health. This realization motivated me to apply my background in physics to atmospheric science, especially atmospheric chemistry, where I feel I can make meaningful contributions toward understanding and mitigating environmental challenges.

**What aspect of your research are you most excited about?**

My research focuses on the chemical and physical characterization of fine particulate matter, which directly impacts public health and climate. By studying aerosols' behavior, sources, and interactions in urban environments, I aim to provide data that can help inform policies for reducing pollution and improving air quality. I hope my findings will benefit the global scientific community by enhancing our understanding of atmospheric processes, which are crucial for developing accurate air quality forecasts and climate models. My work on improving atmospheric models like WRF-Chem also helps in

refining predictive capabilities, which is vital for both research and policy-making.

**What do you think is the largest challenge in pursuing a career in atmospheric science?**

Atmospheric science faces multiple challenges, including the complexity of modeling atmospheric processes accurately and the limitations in data from remote or economically constrained regions. Another challenge is the high cost and expertise required to operate advanced real-time monitoring tools. To address these issues, interdisciplinary collaboration is key, as it brings together diverse expertise in physics, chemistry, engineering, and computer science. Investing in advancements in computational modeling, data accessibility, and affordable instrumentation would also significantly help overcome these obstacles.

**What do you think the number one benefit is of participating in an IGAC workshop as an early career scientist?**

The top benefit of participating in an IGAC workshop as an early career scientist is the opportunity to present my research to a global audience and receive valuable feedback from experts in the field. Presenting at the 2024 iCACGP IGAC conference in Kuala Lumpur was a milestone that validated my work and paved the way for potential collaborations.

## IGAC profile

# Keith Noni

**Where are you from?**

I am from the beautiful city of Kuching, Sarawak, in Malaysia. It's the capital and cultural heart of Sarawak, located on the island of Borneo.

**Where did you receive your undergraduate and graduate degrees, and in what subjects?**

I pursued my undergraduate studies at Universiti Malaysia Sarawak (UNIMAS), Malaysia, where I earned a Bachelor of Science in Resource Chemistry. Later, I had the privilege of completing my Master's in Environmental Science through coursework at Universiti Sains Malaysia (USM), Malaysia. These experiences have shaped my passion for environmental and atmospheric chemistry.

**Where and what is your current position?**

I am currently pursuing a PhD in atmospheric chemistry at Universiti Sains Malaysia (USM), Malaysia. It is a tremendous opportunity to contribute to this field and grow as a researcher.

**What is your current area of research?**

My research focuses on reducing volatile organic compounds (VOC) emissions through innovative UV and photocatalytic technologies. I believe these technologies hold significant potential to address pressing environmental challenges.

**What did you like best about the 2024 iCACGP IGAC conference? What would you like to see changed in the future?**

What I appreciated most about the conference was the inclusive and dynamic community. Engaging with scientists of all levels was both inspiring and enriching. For the future, I would love to see sessions that highlight successful policy implementations or prototype developments, especially from the perspectives of policymakers or industry experts. Such insights could provide invaluable lessons for early-career researchers like myself.

**As an early-career scientist, you have an exciting future ahead of you. What type of career and topic do you hope to be working on in 5 or 10 years?**

In five years, I aspire to complete my PhD and transition into a role as a holistic research and development engineer. My dream is to work on creating a sustainable air pollution control technology prototype using advanced UV and photocatalytic methods. Looking further ahead, I hope to continue contributing to sustainable solutions for air quality improvement.

**Is there an element or aspect of your research you believe to be particularly important?**

Absolutely! My work on green materials and technologies aims to sustainably reduce VOC emissions, particularly in indoor environments. By studying cooking emissions in kitchens (residential and commercial),

I hope to identify VOC toxicity and provide a foundation for improved air quality management and mitigation strategies.

**What aspect of your research are you most excited about?**

The most thrilling part of my research journey is discovering solid, evidence-based answers to challenging questions. Each breakthrough, no matter how small, feels like a step closer to making a meaningful impact.

## Submit articles to the next IGACnews

*IGACnews is always happy to receive relevant journal article summaries, event summaries, perspectives, and other articles from the community. Please email* **info@igacproject.org** *with ideas or for more info.*

If you have recently published an IGAC-relevant article and wish for it to be highlighted in IGACnews, please submit the citation to **info@igacproject.org**

## IGAC ON SOCIAL MEDIA

IGAC is on LinkedIn, Twitter and Facebook in an effort to further advance international scientific cooperation and serve as a resource to the public, especially you. Please join us to stay apprised of the most current news on conferences, workshops and publications. Let us hear from you on how to improve the international conversation, **@IGACProject**.

# Chemical, biogeochemical, and physical drivers of the coupled polar atmosphere and climate – an International Polar Year 2032-33 planning workshop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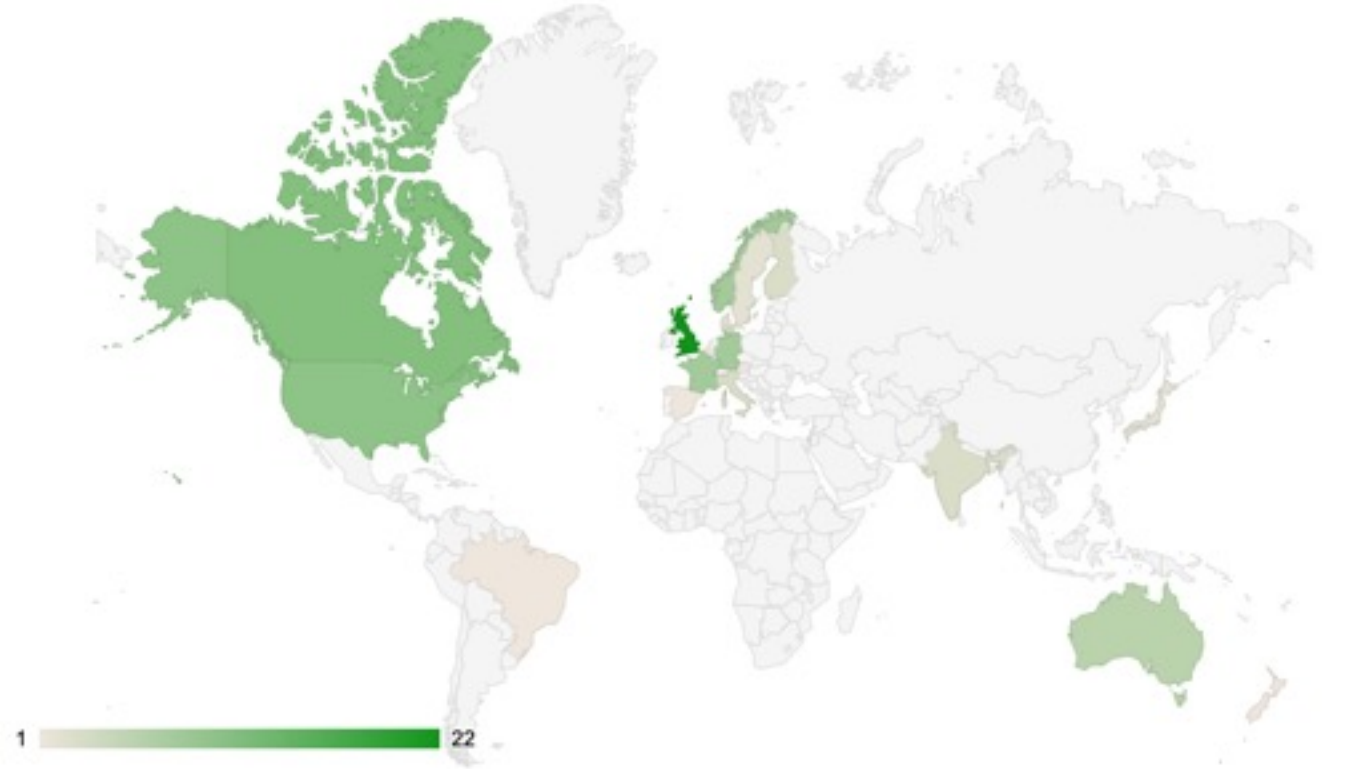
*Note: MMF wrote the report with contributions from all co-authors.*



## SPONSORS AND FUNDING


**In-person participants of the 2024 IPY5 planning workshop in Aussois, France (see workshop URL for full list).**

The International Polar Year 2032-33 planning workshop on **"Chemical, biogeochemical, and physical drivers of the coupled polar atmosphere and climate"** took place at the Centre Paul Langevin in Aussois, France from 17 to 22 November. The joint workshop was fully hybrid and co-organised by the international initiatives **CATCH**, **PACES**, **BEPSII**, **ASPeCt** and **QUiesCENT**. A total of 99 scientists and stakeholders (44 in person) from 21 countries came together (Figs.1,2). The group assembled core expertise in chemical, biogeochemical and physical processes in the Arctic and Antarctic with a research focus on the coupled atmosphere-ice-ocean system and links to climate change. The main workshop objectives were to i) present and discuss interdisciplinary 'big picture' science questions and challenges, and ii) jointly identify research priorities and implementation pathways for research activities in field, laboratory and modelling leading up




**In total, 99 participants (44 in-person) from 21 countries in both hemispheres participated in the IPY5 workshop.**

to and during the **5th International Polar Year (IPY) 2032-2033**. Planned workshop output includes a white paper to shape IPY32 funding calls, underpin grant applications, and influence the planning of polar research cruises, field campaigns and new long-term measurement capabilities.

Participants were from across all career stages including 21 early career researchers (ECRs), who played active workshop roles as session chairs, rapporteurs, presenters and participants in discussions. The enthusiastic contributions by the ECRs (see **workshop URL** for full list) in shaping the workshop are particularly acknowledged due to the importance and value of outcomes from diverse perspectives.

**THE PROGRAMME.** On the first day plenary orientation sessions with short presentations set the scene regarding current research challenges and gaps for an audience from diverse science backgrounds. The SCAR executive director Dr. Chandrika Nath and IASC president Henry Burgess provided the high-level context of the next IPY in describing the aims and strategy from the perspectives of Arctic and Antarctic research; for further reading see also the **5th IPY homepage** and **5th IPY concept note**. This was followed by summaries of research priorities from CATCH, PACES, BEPSII, QUiesCENT and ASPeCt, who had previously consulted their own communities. These were complemented by a series of short talks on recent or ongoing research programs such as 4th IPY project **POLARCAT**, **MOSAiC**, **AC³** or the H2020 projects **CRiceS** and **PolarRES**. A forward look was provided by presentations on, for example, the **Tara Polar Station** and **Antarctica InSync**. Breakout groups then discussed new science for the 5th IPY: which major scientific issues need to be tackled by international collaborative and cross-disciplinary efforts under the 5th IPY framework, considering both Poles; how the identified topics address the IPY concept note and its call to action; if there are possibilities for transdisciplinary research to address the identified topics, including co-development of activities with indigenous or local communities; and finally, how outcomes provide new knowledge for international policy agreements.

On the second day keynote talks on interdisciplinary 'big picture science' at the poles followed by discussion provided a larger view on how topics are connected and how processes in the coupled ocean-ice-atmosphere system are linked and potentially driving climate feedback

loops. Topics included polar sea ice loss, the role of sea ice in polar biogeochemistry and ecosystems, chemical air-snow exchange, short-lived climate forcers, cloud aerosol interactions, climate interventions and policy and socially relevant research in the Arctic. The participants then broke up into smaller groups to rotate through a series of World Café sessions discussing each a specific topic regarding the implementation of new science for the 5th IPY. These topics were: research cruises, modelling experiments, new observation technologies, laboratory experiments, aircraft campaigns and remote sensing, ground observations (short/long term; community involvement).

The third day started off with a session on Indigenous and community collaboration with case studies from the Canadian Arctic, Greenland and New Zealand, and a session on impactful science communication with a strategic outlook on the 5th IPY. Brainstorming sessions then followed up on the discussions from the previous days around new science and implementation pathways to define priority research areas and list main research challenges and tools.

The fourth day commenced with talks reminding the group of some of the target stakeholders for planned IPY activities, including the International Ice Charting WG (IICWG) and Global Cryosphere Watch (CWG)/ WMO. Breakout groups for each of four identified priority research areas continued to discuss and were tasked to produce overview figures for potential use in the planned white paper.

The fifth day concluded the workshop with a public stakeholder session, a workshop synthesis presentation, a talk on perspectives from Climate and Cryosphere (CliC), a core project of the World Climate Research Program, and the final discussion.

**THE HYBRID EXPERIENCE.** The workshop was fully hybrid, and on-site participants were encouraged to log into Zoom to level the playing field with the online participants. Online poster sessions in Gathertown allowed for individual science presentations and further discussions.

**WORKSHOP FEEDBACK.** Participants provided feedback in a survey, which was mostly positive, in particular regarding presentation topical range and quality, space provided for discussions, hybrid management, networking and building an IPY community.

**CONCLUSIONS AND NEXT STEPS.** This group with core expertise in chemical, biogeochemical and physical sciences of the polar atmosphere, ice and ocean made a first step in building a conceptual framework for a 5th IPY research program, which will be fed into the wider IPY process. The four priority research areas identified were: 1. The Water Cycle; 2. Atmospheric Composition; 3. Biogeochemistry and Ecosystems; and 4. The Energy Budget. These research areas rest on five supporting pillars consisting of 1. field observations, 2. laboratory experiments, 3. data management, 4. numerical modelling, and 5. community knowledge and engagement. Together these will enable progress to achieve the larger societal objectives of Global Weather and Climate Understanding, Polar ecosystem health, Global Security and Resilience, and Community Health and Well-Being. A detailed synthesis and overview concept will be published as a white paper in 2025.

It was recognised that rather than duplicating effort this group will liaise with other existing groups and programmes. Furthermore, collaboration and collaborative projects will already start now in preparation of the 5th IPY. To do this the **workshop URL** will be used as a digital hub with the video recordings of keynotes and short presentations publicly available, a participant list, and announcements of future meetings and events via the workshop email list. This group remains open, and anyone interested is welcome to join by emailing **ipy2032workshop@univ-grenoble-alpes.fr**.

**ACKNOWLEDGEMENTS.** We are very thankful for generous financial support from **IGAC**, **IASC**, **SOLAS**, **CATCH**, **CliC** and **CNRS**, which provided full or partial funding to participants, including ECRs and invited speakers, enabling their workshop participation. We also thank Emmanuelle Gennai at **IGE/Grenoble** and the CNRS finance team for their administrative support, as well as Thorsten Bartels-Rausch and the Paul-Scherrer-Institute/Switzerland for providing the platform to host the workshop web page, **https://indico.psi.ch/event/15591/c**

# announcements

## Save the Date!

**2026 iCACGP-IGAC conference in Crete, Greece**

**7-11 September 2026**

**Early career short course dates to be decided.**

**More information to come soon!**

## Early Career Researchers

Stay informed on early career specific resources, activities and opportunities! Led by newly-formed iCACGP-IGAC Early Career Scientific Steering Committee

Website located **here**

The IGAC-iCACGP ECR SSC is excited to announce its online conference for 2025! This event, designed to showcase the work of early career researchers (ECRs) in atmospheric chemistry worldwide and foster networking and engagement, will be held on Thursday September 25th, 2025. To maximize global participation, the conference will be structured across three time zones: Asia/Oceania, Africa/Europe/Middle East, and the Americas. Each time zone's agenda will feature invited talks by ECRs, interactive icebreakers, networking opportunities with established scientists, skills workshops, and poster sessions. Continuing our tradition of supporting ECRs, we will award six poster prizes, each consisting of travel, accommodation, and registration to the joint iCACGP-IGAC 2026 conference and ECR short course in Crete, Greece.

Further information about the schedule, registration and abstract submission will come soon.

## Atmospheric Chemistry Data Sets

IGAC is working on a 'database of databases' searchable metadata initiative. For now, we are collecting links to atmospheric chemistry data sets to later be built into a database with relevant searchable metadata and links to the actual data (no actual datasets will be hosted by IGAC).

Please see databases already included **here** (note that these data are under review and editing now).

Please submit your database to be included here: https://forms.gle/Lm4AbxVLwUHFBVYt5

Data must be open access and peer-reviewed or part of a peer-reviewed or regulatory dataset.

futureearth
Research. Innovation. Sustainability.

## Future Earth New Member Portal is Now Available!

We are excited to announce that the redesigned member portal has been launched! The member portal has been revitalized in consultation with our community to better engage and empower the dynamic international networks of Future Earth.

In the portal, you can share news about your activities, join groups of your interest, connect with sustainability professionals worldwide through the member directory, and access various resources such as the job/funding opportunities board, the events calendar, and the media center. **Explore the member portal** to better connect with our vibrant community!


ALLIN-WAYRA
SENSOR INTEGRATION IN AIR QUALITY MONITORING: THE ROLE OF WMO IN THE GLOBAL SCENARIO
Date :
3 April, 2025
Time :
13:00 - 14:00 (UTC)
Zoom Link
REGISTER NOW!
Meet Our Speaker
Dr. Sara Basart
World Meteorological Organization (WMO)
Scientific Officer
Dr. Carl Malings
Morgan State University
Assistant Research Scientist
Discussion And Insights
This webinar will explore the role of the World Meteorological Organization (WMO) activities in addressing air pollution.
The first presentation will offer a comprehensive overview of current international efforts to monitor, model, and mitigate air pollution that is currently being coordinated at WMO through its research Global Atmosphere Watch (GAW) programme.
The second presentation will delve into the latest WMO report on air quality sensors, discussing how these systems can be effectively integrated with other data sources, including regulatory monitoring networks, numerical models, and satellite remote sensing. Together, these presentations will highlight the WMO's strides in air quality management and the role of innovative technologies in addressing environmental and health challenges on a global scale.
Convenors
Dr. Erika von Schneidemesser
RIFS Research Institute for Sustainability
Research Group Leader
Dr. Sebastian Diez
Centro de Investigación en Tecnologías para la Sociedad, Universidad del Desarrollo, Chile
Researcher

## 2024/2025 10 New Insights in Climate Science Report Highlights Growing Risks, Clear Solutions

Global experts in social and natural sciences unveiled the flagship report 10 New Insights in Climate Science on Monday, which includes warnings on how climate extremes are harming maternal and reproductive health and how perceptions of fairness are a key for public acceptance of climate policies. The annual report – jointly developed by Future Earth, The Earth League, and the World Climate Research Programme – equips policymakers with the latest and foremost climate science research, synthesized to help inform their work this year and beyond.
Find the insights at this link **here**

## Sustainability Research & Innovation (SRI) Congress

The fifth **Sustainability Research & Innovation (SRI) Congress** (SRI2025) will be held in Chicago in 2025, marking its first convening in the United States. The University of Illinois System is the host institution and co-organizer.

## IGAC Sponsored/Endorsed Events

**Allin Wayra Webinar**

WMO activities in addressing air pollution, including a new report on small sensors

**3 April 2025, 13:00-14:00 UTC**

Virtually Everywhere

Registration **here**

**U-APIC webinar series**

Interested in giving a webinar? Sign up **here**

**ACAM 2025 Training School and Workshop**

**9-13 June 2025**

Bali, Indonesia

For more information, see **here**

**GEIA 2025 Conference**

**9-11 July 2025**

Abidjan, Cote d'Ivoire

For more information, see **here**

**iCACGP-IGAC 2025 Early Career Researcher online conference**

**25 September 2025**

Virtually everywhere

More information to come, watch **here**

**Second International Conference on Chemical Weather and Chemical Climate**

**Hosted by MAP-AQ**

**14-16 October 2025**

Ben Guerir, Morocco

For more information, see **here**

## IGAC Related Events and Opportunities

To have your IGAC-related event included on an IGAC bulletin or on the IGAC website, please email info@igacproject.org or fill in the form **here**.

**Second Global Conference on Air Pollution and Health**

**25-27 March 2025**

Cartagena, Colombia

For more information, see **here**

**EGU 2025**

**27 April - 2 May 2025**

Vienna, Austria

For more information, see **here**

Allin Wayra Session: **https://meetingorganizer.copernicus.org/EGU25/session/53568**

SOLAS Session: **https://meetingorganizer.copernicus.org/EGU25/session/53502**

Transport and Air Pollution Session: **https://meetingorganizer.copernicus.org/EGU25/session/53556**

**CAMEO**

**CAMS EvOlution Horizon Europe Project Online Workshop**

**23 June 2025, 10:00-12:00 CEST**

Virtually Everywhere

Sign up to attend **here**

**Health Effects Institute Annual Conference**

**4-6 May 2025**

Austin, TX, USA

For more information, see **here**

**Air Sensors International Conference**

**19-22 May 2025**

Bangkok, Thailand

For more information, see **here**

**SRI 2025**

**16-19 June 2025**

Chicago, IL

For more information, see **here**

**Satellite Event**

**4-6 June 2025**

Nairobi, Kenya

For more information, see **here**

**12th International Conference on Urban Climate**

**7-11 July 2025**

Rotterdam, Netherlands

Two U-APIC related sessions:

Urban Air Pollution: Interaction with Climate and Impact on Health **(https://meetingorganizer.copernicus.org/ICUC12/session/54463)**

Urban Heat, Air Pollution, and Human Health in the Context of Early Warning Systems and Action Plans **(https://meetingorganizer.copernicus.org/ICUC12/session/54461)**

For more information, see **here**

**BACO 2025**

**19-25 July 2025**

Busan, South Korea

For more information, see **here**

**Asian Oceania Geosciences Society**

**21 July - 1 August 2025**

Singapore

Abstract deadline 18 February 2025

U-APIC related session: Urban Air Pollution: Interaction with Weather/Climate and Impact on Health **(https://www.asiaoceania.org/aogs2025/public.asp?page=submissions.asp#SA)**

For more information, see **here**

**Atmospheric Chemistry Gordon Research Seminar**

**2-3 August 2025**

Maine, USA

Applications for oral presentations and travel support due **27 April 2025**

The Atmospheric Chemistry GRS provides a unique forum for young doctoral and post-doctoral researchers to present their work, discuss new methods, cutting edge ideas, and pre-published data, as well as to build collaborative relationships with peers.

Applications for this meeting must be submitted by **July 5, 2025.** Please apply early, as some meetings become oversubscribed (full) before this deadline. Note: Applications for oversubscribed meetings will only be considered by the conference chair if more seats become available due to cancellations.

GRS Speaker Abstract Deadline: Although applications will be accepted until the date noted above, any applicants who wish to be considered for an oral presentation should submit their application by **April 27, 2025**. Please refer to the application instructions on the conference website.

More information **here**

**Atmospheric Chemistry Gordon Research Conference**

**3-8 August 2025**

Maine, USA

More information **here**

**Second International Conference on Chemical Weather and Chemical Climate**

**Hosted by MAP-AQ**

**14-16 October 2025**

Ben Guerir, Morocco

More information **here**

**6th Symposium of the Committee on Space Research (COSPAR)**

**3-7 November 2025**

**Nicosia, Cyprus**

Abstract Deadline: **4 April 2025**

For more information, see **here**

**14th Asian Aerosol Conference**

**2-5 December 2025**

Mumbai, India

More information to come

**46th Scientific Assembly of the Committee on Space Research and Associated Events**

**COSPAR 2026**

**1 - 9 April 2026**

Florence, Italy

For more information, see **here**

**Science on the 7th**

Health Effects Institute

Monthly webinars on health effects of air pollution

For more information, see **here**

**ESWN**

**Earth Science Women's Network**

Events Calendar **here**

# community


**IGAC International Project Office**
*University of Colorado, CIRES, Boulder, CO USA*

**H. Langley DeWitt**
*IGAC Director*
**langley@igacproject.org**




**Events**
*monthly in IGAC eBulletins and on*
**igacproject.org**

## Join the IGAC Community

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