International Laboratory for Air Quality and Health

WHO Collaborating Centre

ANNUAL REPORT

2025

INTERNATIONAL LABORATORY FOR AIR QUALITY and HEALTH (ILAQH)

WORLD HEALTH ORGANISATION COLLABORATING CENTRE FOR AIR QUALITY AND HEALTH

1. Introduction

The International Laboratory for Air Quality and Health (ILAQH) is part of the School of Earth and Atmospheric Sciences (EAS), at the Queensland University of Technology (QUT). ILAQH undertakes research, postgraduate training and consultancy in the complex, interdisciplinary field of air quality and its impact on human health, with a specific focus on ultrafine and nanoparticles. The three main aspects of ILAQH research activities are:

- Comprehensive characterisation of indoor and outdoor air, including emission sources.
- Integrated health and environmental risk assessments.
- Strategies for controlling and managing air pollutants.

To address the challenge related to the interdisciplinary nature of air pollution and its impact on human health, academics from several Faculties within QUT are involved with the programs undertaken by the ILAQH, including discipline areas such as physics, chemistry, microbiology, mathematics, public health, and engineering. The expertise of the ILAQH personnel is strengthened by close collaboration with several government and non-government organizations. Through joint research, lecturing and postgraduate student supervision, the ILAQH collaborates closely with several North American, European, and Asian research and tertiary organizations.

The facility is equipped with state-of-the-art instrumentation for aerosol generation, mass and number size classification; monitoring of atmospheric gases; real time biological studies; vehicle emission testing, filter testing, lung deposition studies, and computer modelling. Access to electron microscopy and analytical chemistry facilities is available through the links existing within the faculty.

The ILAQH has built up a scientific program, which is recognised internationally through a high publication rate in reputable international journals, visits by scholars from around the world to the facility, and invitations to the ILAQH key researchers to address international conferences and participate in international initiatives. In Australia both the Queensland State and the Federal government and non-government organizations regularly seek the expertise of this facility.

The ILAQH is a Collaborating Centre of the World Health Organization for Air Quality and Health, since 2004. In July 2019, the ILAQH was re-designated for the third time as a World Health Organization (WHO) Collaborating Centre for Air Quality and Health.

2. Collaboration with the World Health Organization (WHO)

Distinguished Professor Lidia Morawska has made a sustained longstanding and ongoing contribution in her service as an advisor to the **World Health Organization (WHO)**.

As a **collaborator and adviser to the WHO**, Prof Morawska has contributed to all WHO air quality-related guidelines over the past two decades. She Co-Chairs the Guideline Development Group responsible for the air quality guidelines, the most important document on which nations base their air quality standards. The new WHO Global Air Quality Guidelines (AQG) (2021) has set new directions for air pollution management and, includes ultrafine particles (UFPs), based on the cutting-edge research conducted over two decades done by D/Prof Morawska and her team, which has influenced policy makers. She has also contributed to the Best Practiced Statement for UFPs in the new WHO Global AQG (2021), based on the White Paper titled, "Ambient ultrafine particles: evidence for policy makers"). In addition, the WHO policy range of initiatives she has been involved with over the years, includes:

(i) Work on international **WHO Guideline** documents, serving as the main reference point for the international community, including WHO Guidelines for: Air Quality (2021, she is Co-Chair); *Healthy Housing 2018; Household Combustion, 2014; Indoor Air Quality: Selected Pollutants, 2010; Indoor Air Quality Guidelines on Dampness and Mould, 2009; Air Quality, 2005; Concentration and Exposure-Response Measurements of Fine/Ultrafine Particulate Matter, 2002; and Dust Prevention in Workplaces, 1996.*

(ii) Work towards improvement of the quality of air in **developed/developing countries** through assisting governments in forming national air quality legislation in major epidemiological studies on air quality impacts.

(iii) Participation in **WHO Health Emergencies Program (WHE) Response Groups** (e.g., 2003 SARS, and COVID-19). During the COVID-19 pandemic she was invited by the WHO Chief Scientist Dr. Soumya Swaminathan and COVID-19 technical lead Dr. Maria Van Kerkhove, to contribute to the "WHO Global Multi-Disciplinary Discussion Forum on SARS-CoV-2 Modes of Transmission"; as well as by the Director of Environment, Climate Change and Health Department Dr Maria Neira, to contribute to the "WHO Environment and Engineering Control Expert Advisory Panel (**ECAP**) for COVID-19", and further to support the preparedness, readiness and response to COVID-19.

She has contributed to guidance/recommendation documents on COVID-19, such as:

- **WHO Interim Guidance** on Infection Prevention and Control (IPC) strategy titled, "Infection prevention and control during health care when coronavirus disease (COVID-19) is suspected or confirmed" (July 2021).
- "WHO Roadmap to improve and ensure good indoor ventilation in the context of COVID-19" (April 2021).
- **WHO Scientific Brief** on airborne transmission titled, "Transmission of SARS-CoV-2: implications for infection prevention precautions" (July 2020).

More recently, she participated in the activities of the:

- 'Through The Air Transmission (**TTAT**) Technical Consultation Group', who published an important document titled, "Global technical consultation report on proposed terminology for pathogens that transmit through the air" (18 April 2024); and the
- WHO WHE 'Airborne Risk Indoor Assessment (**ARIA**) Technical Working Group', led by Dr. Luca Fontana and co-chaired by Prof Morawska, who published a report titled, "Indoor airborne risk assessment in the context of SARS-CoV-2: description of airborne transmission mechanism and method to develop a new standardized model for risk assessment" (28 March 2024).

In **2025**, Prof Morawska was invited by the WHO as a consultant on air pollution, to participate in the following activities:

- Participated and presented at the '**WHO 2nd Global Conference on Air Pollution and Health**', Cartagena, Colombia, from 25-27 March 2025. Presented in Session 3C: "***Healthy Indoor Spaces: Improving Indoor Air Quality to Protect Our Health***". She also presented in Session 7c: "***Bridging air pollution, health and climate: Tacking black carbon and ultrafine particles***", where she gave an overview of the exposure and health effects of ultrafine particles (UFPs).

  Presentation 1: *Overview of the exposure and health effects of ultrafine particles.*
  Presentation 2: *Overview of Health Impacts of Indoor Air Pollution Exposure: communicable and noncommunicable.*

- Participated in the meeting of the '**WHO partnership with Collaborating Centers: Strengthening value and impact**', WHO Collaborating Centres Team, 7 April 2025.

- Reviewed the 'WHO Air Quality, Energy and Health Science and Policy Summaries: **Health effects of air pollution – evidence and implications Technical brief'** in May 2025

- **Signed the the open letter of WHO CCs to support WHO** in May 2025.

- Participated in the meeting **'Committing to clean air: next steps after WHO's 2nd global conference on air pollution and health – the way forward for implementation',** held 18 June 2025.

- Participated in the activities of the '**External Expert Group (EEG) for Beat the Heat Initiative: Mass Gathering Compendium development and Evidence review**', June 2025. This work is ongoing.

- Participated in the Virtual '**WHOCC forum: Invitation to Pre-Forum Briefing on Health Research Ecosystem**', 16 September 2025

- Re-reviewed the '**WHO public health research agenda for influenza: 2024 update**' document, September 2025.

- Published a document, "**Fundamental questions and principles for action from the Particle pathway, sixth Workplace and Indoor Aerosols Conference. Meeting report, Gaeta, Italy, 6–8 May 2025**" *https://iris.who.int/items/9fb7d176-f661-4461-a018-043b8042eedc*

3. ILAQH Researchers in 2025

Director
Distinguished Professor Lidia Morawska

Academic Staff
Professor Zoran Ristovski
Professor Godwin Ayoko
Dr Branka Miljevic
Dr Joel Alroe

Senior Research Fellows/Associates
Dr Congrong He
Dr Rohan Jayaratne

Postdoctoral Research Fellows
Dr Enoch Adotey
Dr Robert Groth
Dr Martin Larbi
Dr Zijun Li
Dr Magdalena Okuljar
Dr Henry Oswin
Dr Jakob Pernov
Dr Juha-Matti Sulo
Dr Dwan Vilcins

Associated Academic/Adjunct Staff
Adjunct Professor Giorgio Buonanno (University of Cassino, Italy)
Professor Robin Drogemuller (Faculty of Engineering, School of Architecture & Built Environment, QUT)
Adjunct Professor Hai Guo (Hong Kong Polytechnic University, Hong Kong)
Professor Clinton Fookes (Faculty of Engineering, QUT)
Adjunct Professor Prashant Kumar (Global Centre for Clean Air Research (GCARE), University of Surrey)
Associate Adjunct Professor Xuying Ma (Xi'an University of Science and Technology, China)
Adjunct Associate Professor Wendy Miller (QUT)
Adjunct Professor Heidi Salonen (Aalto University, Finland)
Adjunct Professor Tunga Salthammer (Fraunhofer WKI, Germany)
Adjunct Professor The Hon Robin Scott (Former Member of Victorian Parliament)
Adjunct Professor Phong Thai (University of Queensland)
Associate Professor Helen Thompson (School of Mathematical Sciences, QUT)
Adjunct Professor Hao Wang (Jinan University, China)

Honorary Research Fellows
Dr Peter McGarry, Senior Occupational Hygienist and Manager Specialist Services, HSW Division The University of Queensland
Dr Hamesh Patel, Mote New Zealand

Training Centre Manager – THRIVE
Mr Rafat Alam

Research Support Officer
Ms Chantal Labbe

Doctoral Students
Abithaswathi Muniraj Saraswathy (Supervisor: Branka Miljevic)
Amin Tavakoli (Supervisor: Zoran Ristovski with Leoni Barner)

Ashkan Jahandari (Supervisor: Lidia Morawska and Rohan Jayaratne)
Behnaz Alinaghipour (Supervisor: Zoran Ristovski with Branka Miljevic)
Bingnan Zhao (Supervisor: Harshala Gammulle with Lidia Morawska)
David Corporal (Supervisor: Branka Miljevic)
Dilani Madhubhashini (Supervisor: Enoch Adotey with Lidia Morawska)
Geoffrey Hanmer (Supervisor: Richard Brown with Lidia Morawska)
Harsh Raj Mishra (Supervisor: Zoran Ristovski with Branka Miljevic)
Hongzhi Zhang (Supervisor: Lidia Morawska with Karen Sullivan)
Justine Hupkes (Supervisor: Richard Brown with Lidia Morawska)
Kavindi Gunasinghe (Supervisor: Henry Oswin with Lidia Morawska)
Lingli Guo (Supervisor: Lidia Morawska)
Mohammad Sarmadi (Supervisor: Lidia Morawska with Sara Omrani)
Parwapath (Patty) Phunthirawuthi (Supervisor: Lidia Morawska)
Punsara Dharaka (Supervisor: Enoch Adotey with Lidia Morawska)
Qing Guo (Supervisor: Godwin Ayoko with Zoran Ristovski)
Ruiwen Wang (Joint QUT-JNU student, Supervisor: Zoran Ristovski with Branka Miljevic)
Sahar Elkaiebehjati (Supervisor: Zoran Ristovski)
Saima Khan (Supervisor: Joel Alroe with Zoran Ristovski)
Samitha Wijewantha (Supervisor: Henry Oswin with Lidia Morawska and Enoch Adotey)
Savinda Heshani (Supervisor: Lidia Morawska with Rohan Jayaratne and Clinton Fookes)
Udita Gupta (Supervisor: Lidia Morawska with Richard Brown)
Yik Sze Lau (Supervisor: Branka Miljevic with Zoran Ristovski)

Doctoral Students (enrolled in other QUT Schools and other Universities)

Abdullah Ateeq Aloufi (Supervisor: Godwin Ayoko with Lidia Morawska)
Poorna Jinendri Rajapathirane (Supervisor: Clinton Fookes with Lidia Morawska)
Mojibul Sajjad (Supervisor: Richard Brown QUT with Zoran Ristovski)

Masters Students

Holly Louise Scoble (Supervisor: Zoran Ristovski with Joel Alroe)
Robert Sharon (Supervisor: Lidia Morawska with Lindy Burton)
Robyn Meldon (Supervisor: Lidia Morawska with Richard Brown and Enoch Adotey)

Honours Students

None

Postgraduate Completions, PhD

Lisa Coulbourn (Supervisor: Wendy Miller with Lidia Morawska)
Jimmy Hilly (Supervisor: Andrew Dansie UNSW with Lidia Morawska)

Postgraduate Completions, Masters

Samuel Gordon Putland (Supervisor: Branka Miljevic with Zoran Ristovski and Joel Alroe)

Research Assistants

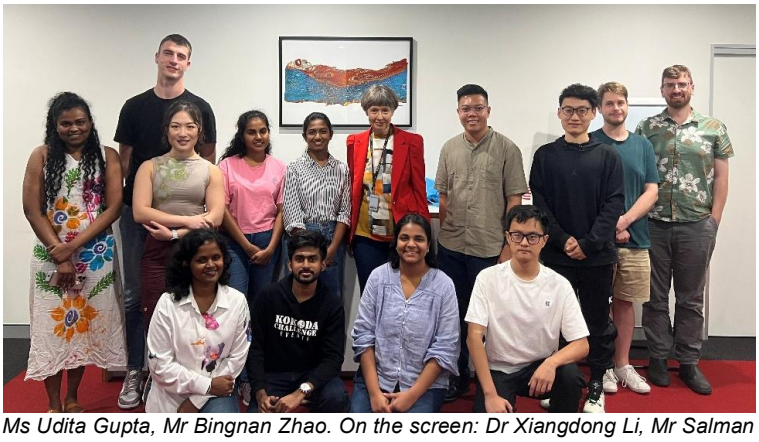
Sean Francis
Daniel Guo
Huon Morton

Destination of our Graduates (Current Positions)

Academic Positions in Top International Universities / Organisations

4. Major Research Highlights

- Some of our researchers congregated at a recent **PhD Research Philosophy meeting**. The group has been getting together in a series of meetings to discuss how to successfully conduct and complete a PhD research program, have fun, and build a legacy. The first meeting was held on 17 February 2025 and was led by the Academics and Supervisors. The second meeting was held on 14 April 2025 and was led by the PhD students. The third meeting for the year took place on 23 October 2025.



(Image, back row: Mr Antoine Geray. Second row: Ms Savinda Heshani, Dr Hedy Wang, Ms Samitha Wijewantha, Ms Dilani Madhubhashini, Prof Lidia Morawska, Dr Ren Estaquito, Hongzhi Zhang, Dr Robert Groth, Dr Henry Oswin. Front row: Ms Kavindi Gunasinghe, Mr Punsara Dharaka, Ms Udita Gupta, Mr Bingnan Zhao. On the screen: Dr Xiangdong Li, Mr Salman Khan of The University of Melbourne)

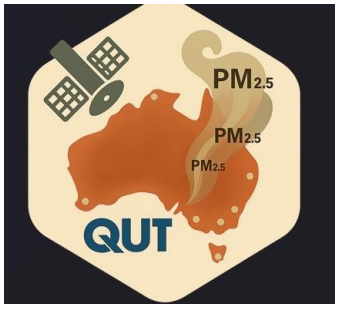
- It was an honour to host Her Excellency, **The Governor-General, the Honourable Ms Sam Mostyn AC,** at ILAQH, QUT on 24 February 2025. Her Excellency was thrilled to hear about the groundbreaking research and innovative work happening here. We are proud to share our passion for advancing knowledge in air quality and making a real-world impact. The conversation was inspiring, and we are so grateful for the opportunity to showcase the incredible strides our team is making.

- The World Health Organization (WHO) hosted the '**2nd WHO Global Conference on Air pollution and Health**' in Cartagena, Columbia from 25-27 March 2025. This conference focussed on accelerating action for clean air, clean energy access, and climate change mitigation. It leveraged insights from the COVID-19 pandemic, from experts who explored solutions to improve indoor environments, reduce health risks, and align air quality goals across sectors and regions. D/Prof Lidia Morawska presented in two sessions at the conference. One session titled, "*Healthy indoor spaces: Improving indoor air quality to protect our health*". Indoor air pollution is a global health challenge affecting billions. This session examined pollutants, health impacts, and mitigation strategies in diverse settings. She also presented at a session titled, "*Bridging air pollution, health and climate: Tacking black carbon and ultrafine particles*", where she gave an overview of the exposure and health effects of ultrafine particles (UFPs). Black carbon and UFPs present significant health and climate risks. This session reviewed the latest evidence on exposure and health effects, highlighted actionable mitigation strategies, and encouraged collaboration across sectors. Discussions focussed on how integrated approaches can achieve measurable health benefits while driving progress in air quality and climate action.

- Distinguished Professor Yuan-Chung (Oliver) Lin of the **National Sun Yat-sen University, Taiwan**, visited ILAQH, QUT on 11 April 2025 with two of his PhD students. Professor Lin is Coordinator of the Environmental Engineering Program. D/Prof Lidia Morawska gave a tour of our facilities and explained our work in indoor air quality (IAQ). It was agreed that we would look at possible collaboration in the future between Thrive and the National Sun Yat-sen University, Taiwan.

- Measurements wrapped up in May 2025 for A/Prof Branka Miljevic's project "**CAPE-K: Aerosol composition and precursors".** Production of aerosol particles in the marine environment occurs primarily via two pathways: 1) wave breaking and bubble bursting, which results in primary particles composed mainly of sea salt and biogenic organic matter, and 2) sea-air exchange of gaseous compounds produced by marine biota (phytoplankton, algae), in particular dimethyl sulphide, and the subsequent secondary particle formation from oxidation of these species. Aerosols resulting from these two different sources will have different composition, size and number concentration, and, therefore, different ability to act as cloud condensation nuclei. Knowing the spatial and temporal impact of these sources on the overall aerosol populations and physicochemical properties is vital in attributing climate impacts to biogenic sources versus wind and bubble bursting produced sea-salt aerosol. Cape_k_Chem seeks to expand the scope of measurements being conducted during the Cape-k period to include aerosol size-resolved chemical composition (1), aerosols precursor vapours (2), and new particle formation (3), with the aim to enhance our understanding of processes driving aerosol formation, growth to seeds for cloud droplets, and overall aerosol populations over the Southern Ocean. The proposed additional measurements will be achieved by deploying the following instruments: (1) High resolution Time of Flight Aerosol Mass Spectrometer (HR ToF-AMS), (2) Nitrate-Chemical Ionisation Mass Spectrometer (Nitrate-CIMS), and (3) Neutral cluster and Air Ion Spectrometer (NAIS), with all three being deployed at the kennaook/Cape Grim station for the first time. For more information

- **Dr Zijun Li** and **Dr Jacob Pernov** have both been awarded the **QUT Resilience Center ECR Seed Grant**. Zijun Li's project is titled "Mapping surface $PM_{2.5}$ during Australian Bushfire Season using Satellite Optical Depth". A team from EAS, including Zijun Li, Catherine Kim, and Adolfo Lugo Rios, has secured an ECR seed grant of $14,500 from the QUT Resilience Centre. They will work on a project to map surface $PM_{2.5}$ across Australia during bushfire seasons by linking satellite aerosol optical depth with existing surface $PM_{2.5}$ measurements. This will provide insights into bushfire-related $PM_{2.5}$ in regions lacking ground-level monitoring. A 6-month research assistant position will be available for the project. Please see attached position description for more information.



  Dr Jakob Boyd Pernov's project is titled "Improving the GEOS-Chem model for biogenic aerosol processes using Southern Ocean and Antarctic observations and machine learning". The Southern Ocean (SO) and Antarctica is of great importance to global and Australian climate. Climate models, including those informing the Intergovernmental Panel on Climate Change (IPCC), perform particularly poorly in SO/Antarctic region. The models persistently overpredict the amount of solar radiation reaching the Earth's surface, due to misrepresenting aerosol and cloud processes, causing an overprediction of sea surface temperatures. In this project, I will perform a bias correction of the GEOS-Chem model via machine learning (ML) techniques utilizing a plethora of SO/Antarctic observations of methanesulfonic acid (MSA), a biogenic aerosol component critical for cloud formation. This project will produce a freely available ML model, serving as a valuable tool for the atmospheric community and providing a deeper understanding of biosphere-atmosphere-climate dynamics.

- The interdisciplinary forum on "**Indoor Air Quality in Schools**" was hosted by THRIVE, QUT on 17 July 2025, and aimed to discuss how to achieve a balance between all the requirements for clean indoor air and thermal comfort while consuming the least amount of energy possible and using resource efficiently. The presenters and panellist included: D/Prof Lidia Morawska (QUT, THRIVE), Ms Robyn Meldon (Department of Education Queensland), Professor Prof Geoff Hanmer (ARINA, UTS ,THRIVE), Mr David Thornton (COO, Somerset College), Associate Professor Wendy Miller (QUT, THRIVE), Professor

Priyadarsini Rajagopalan (RMIT University), Professor Jason Monty (University of Melbourne , THRIVE), The Hon Ted Baillieu (Former Premier of Victoria), The Hon Robin Scott (Former Member of Victorian Parliament), Mr Nicholas Burt (CEO, Facility Management Association of Australia).

The forum was attended by over 130 people between in person and online participants, and concluded with some clarity on how we can implement solutions to improve IAQ in schools, with discussions on regulation and what is needed to ensure government is able to create the change our children desperately need. We are compiling a summary document of the Forum for publication in a journal.

- A **PhD student from Polytech Clermont in France, Mr Antoine Geray**, conducted a visit with ILAQH from 1 April to 31 July 2025. The title of Antoine's project was titled, "Study and collection of bioaerosols for the quantification of indoor airborne infection risk". Bioaerosols (airborne particles that carry microorganisms) are highly variable particles, being generated from a range of sources, both anthropogenic and environmental. Depending on their origin, they can range in size from less than 100 nm to more than 100 µm and be composed of anything from soil to saliva. Collecting bioaerosols is an essential technique in aerobiology, enabling us to quantify the amount of particular bioaerosols (i.e. respiratory particles) present within different environments, and to characterise various aspects of them such as their size and composition. Using bioaerosol sampling to target respiratory particles within indoor environments can improve our understanding of the transmission of respiratory diseases, which can potentially aid in the development of improved infection control measures. In this work a novel bioaerosol sampling method was developed, in which air was drawn air through ice, with the particles being sampled into the meltwater. Microbial culture and PCR can then be used to quantify and characterise the microbial content of this meltwater, with the assays either targeting pathogens of interest, or microflora common to the human respiratory tract. Initial testing of this approach yielded positive results, although there is scope for further optimisation to enable its practical application.

I want to say that this internship was an unforgettable experience, forever etched in my memory, and this is thanks to all of you.

I wish to express my deep gratitude to Distinguished Professor Lidia Morawska for hosting me in her laboratory and offering this unique opportunity. I also thank Chantal Labbe, who took the time to exchange with me through numerous emails before my arrival, answering each of my questions regarding life in the laboratory and thus putting me in the best conditions to come to Australia.

I would like to extend a huge thank you to Dr. Henry Oswin, who accompanied me throughout this internship. His pedagogy, patience and clear explanations allowed me to progress not only from a professional point of view, but also on a personal level. Thanks to him, I was able to gain autonomy, confidence, and deepen my scientific reflection.

I also thank each of you, members of the laboratory. I will really miss you. Here, I discovered a true work atmosphere, driven by a mentality that I will not forget. A true spirit of mutual aid, respect and kindness reigns there.

This internship also allowed me to open my eyes to the beauty of diversity. No matter where we come from, no matter our cultures, our origins or our personal stories: in the end, we are part of the same world. And it is precisely this diversity that makes the wealth of our world. Our differences are strengths, they allow us to learn from each other, grow, open our minds and build greater things together.

By leaving, I keep in myself not only knowledge and skills, but above all this deep conviction: it is by valuing our differences and working together that we build a better world. In four months, I tried to learn a little from each of you and I thank you for everything you have given me. You are truly wonderful people, never change. I sincerely hope that our paths will cross one day. – Antoine Geray

- **Prof Zoran Ristovski** joined an expert panel at Palais Eschenbach, Vienna on 27 August 2025, as part of the 22nd International Conference on Nucleation and Atmospheric Aerosols (ICNAA 2025). The session, “Do we need to darken the sun? Solar radiation management as a solution to the climate crisis?”, explored one of the most debated topics in climate science: solar radiation management – the idea of reflecting a small fraction of sunlight back into space to cool the planet. The panel of experts to discuss the science, opportunities, and risks of these approaches included: Prof Markku Kulmala (University of Helsinki), Prof Ulrike Felt (University of Vienna), Dr Blaž Gasparini (University of Vienna), Simon Ellmauer-Klambauer (Republic of Austria).

  Open to the public, the event was well attended and fostered a thoughtful discussion on the ethical, scientific, and societal dimensions of solar radiation management, highlighting the value of interdisciplinary dialogue in addressing climate challenges. Building on the insightful discussions initiated during ICNAA2025 in Vienna, a dedicated session at the International Aerosol Conference 2026 (IAC2026) will be held titled, ‘G-7: Solar Radiation Management’. This session will focus on advancing our understanding of solar radiation measurements and their implications for climate intervention strategies. Given the central role of aerosols in these processes, it is imperative that the aerosol science community actively contributes to this dialogue. We invite researchers, academics, and practitioners in atmospheric sciences, climate modeling, and aerosol science to participate and share their expertise. Your contributions will be vital in shaping the scientific foundation of this emerging field.

- A great visit on 2 September 2025, by **Dr Kazukiyo Kumagai**, leader of the Air Quality Section of the California Department of Public Health to ILAQH. He gave a presentation titled “Improving indoor air quality in California”, visited our lab, and then had a discussion involving our researchers, partners, academics and some of our colleagues from the government.

1. Pictured from L-R: Lidia Morawska and Kazukiyo Kumagai; 2. pictured from L-R): Mohammad Sarmadi, Ashkan Jahandari, Kazukiyo Kumagai, Udita Gupta, Dilani Madhubhashini, Samitha Wijewantha, Punsara Dharak

- A large team from our school recently presented their research at two major European conferences: the International Conference on Nucleation and Atmospheric Aerosols (ICNAA2025) in Vienna and the European Aerosol Conference (EAC2025) in Lecce during the period of 31 August – **5 September 2025**. The QUT team – A/Prof Branka Miljevic, Dr Zijun Li, Dr Jakob Pernov, Dr Juha Sulo, Dr Magdalena Okuljar, Mr Harsh Raj Mishra, and Prof Zoran Ristovski—delivered a series of talks and posters showcasing exciting new findings on the Southern Ocean, Antarctica, the Great Barrier Reef, Solar Radiation Management, and laboratory studies on Secondary Organic

Aerosols (SOA) and glassy aerosols. Their contributions highlighted the diversity and strength of our group's research across key areas of atmospheric science.

- Our researchers (**Dr Joel Alroe and Ms Saima Bakht khan**) have advanced the understanding of how to create tiny seawater droplets that form mist plumes, which reflect sunlight to protect coral reefs. PhD researcher Ms Saima Bakht khan said the finding could lead to improvements in high-pressure spray systems used by the Reef Restoration and Adaptation Cooling and Shading team to create a dense mist of sea spray capable of shielding high-priority reefs during days of sweltering, calm weather that bring the greatest risk of coral bleaching. They used a combination of wind tunnel experiments and computer modelling to analyse how filtered seawater droplets behave when sprayed through 'impaction-pin nozzles. They found the spray produced a wide, even mist of droplets at sizes consistent across experiments. Read more

- An incredible week it was in New York at the United Nations General Assembly 2025, with the first-ever UN side-event session on IAQ *'**Healthy Indoor Air: A Global Call to Action**'* held on 23 September 2025. It was a defining moment when the Global Pledge was first signed by Mr. Ervin Ibrahimović (Deputy Prime Minister and Minister of Foreign Affairs of Montenegro), and Inger Andersen (Under-Secretary-General, UN and Executive Director, United Nations Environment Programme (UNEP)). The Global Pledge now has over 165 signatures from organizations from all over the world – an international effort to formally recognize clean indoor air as essential to health and well-being, building on the WHO's 2021 declaration that clean air is a basic human right.

(L-R) University of Melbourne Professor Jason Monty, Founder Safer Air Project Plum Stone, QUT D/Professor Lidia Morawska, Australian Academy of Science Chief Executive Anna-Maria Arabia OAM, University of Melbourne Honorary Professor Bronwyn King AO, University of Melbourne Professor Rebecca Bentley, University of Melbourne Professor Christhina Candido, Australian Academy of Science Events and Outreach Manager Lisa Crocker and Australian Academy of Science Director of Philanthropy Kate Groves. View a recording of the event (starts at 54 mins into the video) | For the full story, more photos and to read Lidia's UN speech | More information on the Global Pledge and sign it here

- During the session, the International WELL Building Institute ***'Global Commission on Healthy Indoor Air'*** was announced, an initiative led by the to combat the worldwide indoor air crisis. As co-chair, D/Prof Lidia Morawska will help lead the Commission in elevating a global call to action that places healthy indoor air at the forefront of public health and policy priorities; build global awareness by highlighting the urgent human and economic costs of unhealthy indoor air; establish a *Global Framework for Action* with clear prescriptions across key pillars of market transformation; and catalyse country-specific National Blueprints in collaboration with local stakeholders to strengthen IAQ efforts around the world. The Commission's Framework will be released by the end of 2026, alongside National Blueprints published on a rolling basis. The WELL Showcase Event "Improving Indoor Air Quality to Unlock Human Health, Organizational Performance and a Sustainable Future" took place the following day on 24 September 2025. More on this to come. More about the Global Commission on Health Indoor Air

- On 9 October 2025, **Professor Giorgio Buonanno** of the University of Casino and Southern Lazio, Italy, and Adjunct Professor of ILAQH, QUT, gave an invited guest lecture to ILAQH titled "Secondary aerosol generation from surface and air disinfection: environmental and occupational perspectives". Prof Buonanno's research contributions fall into the aerosol metrology, the characterization of urban atmospheric pollution, the particle emissions from industrial plants and commercial devices and the IAQ, in the airborne transmission of respiratory pathogens. If you missed out on the webinar, you can now watch it on YouTube.

- We co-organized the **2025 Clean Indoor Air for ALL Conference** alongside by the Clean Air Society of Australia and New Zealand (CASANZ), which took place in Melbourne on 13-15 October 2025. This conference brought together global experts to tackle the critical challenges of IAQ. IAQ is a fundamental determinant of human health, safety and well-being, yet the challenges we face in improving air quality are more complex than ever. This conference focussed on bridging the gap between public health and occupational health, ensuring IAQ management strategies protect both the general population and workplace environments.

- We launched the **State of Indoor Air in Australia 2025 Report** on 13 October 2025. Led and authored by A/Prof Wendy Miller and D/Prof Lidia Morawska, this is the first national report to collate the scientific evidence of indoor air quality in Australian buildings.

  Australia has been producing State of the Environment reports for more than two decades, yet it has not, until this report, undertaken to quantify the state of indoor air. The scientific evidence of the importance of IAQ for occupant health is unequivocable, as is the evidence quantifying the health, social and economic costs of poor IAQ. Translating this evidence into policy and practice is challenging in the absence of data about the current status of air inside Australian buildings of all types.

  At the launch, we provided an overview of the report's findings: key insights from the scientific papers reviewed, and what this means for what is known, and unknown, about indoor air quality in different building classes, as well as how this informs the development of a national strategy on clean indoor air.

  The day continued with three sessions exploring what this report means for science, for practice, and for policy. Guest speakers included Ms Anna-Maria Arabia (Chief Executive, The Australian Academy of Science), Prof Brendan Crabb AC (Chief Executive, Burnet Institute), Mr Liam O'Brien (Assistant Secretary, Australian Council of Trade Unions (ACTU)), Mr Nicholas Burt (CEO, Facility Management Association of Australia (FMA)), the Hon Ted Baillieu (former Premier of Victoria) and the Hon Robin Scott (former member of Victorian parliament). They were joined by other experts in panel discussions chaired by Wendy and Lidia

  The data presented in this report is helpful in:

  👉 providing insights into the range of IAQ conditions in different building classes over time;

  👉 highlighting some of the key contributors to, and impacts of, poor air quality;

  👉 quantifying the importance of source control, ventilation and filtration as strategies for improving IAQ;

  👉 presenting multi-disciplinary approaches in study design and implementation; and

  👉 providing solutions or strategies that could be applied to buildings of the same class, or between buildings in different classifications.

  This report acts as a baseline report for IAQ and as a catalyst for multi-jurisdictional and transdisciplinary discussion and debate that leads to the development and implementation of a national strategy for IAQ. It is hoped that this report will be augmented periodically with more data as it becomes available, enabling improvements in indoor air quality to be tracked over time, and the impact of interventions to be evaluated. Download a copy of the report

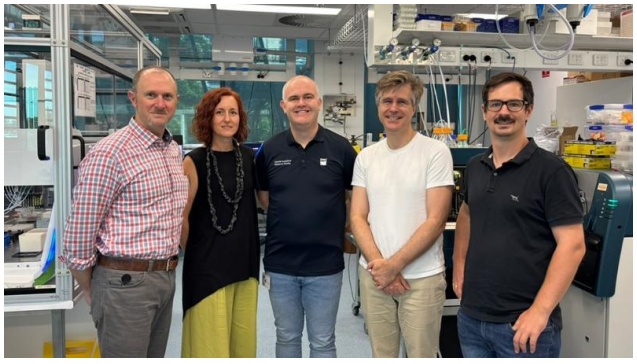
- A new **report** was launched on 5 November 2025 by **The Australian Academy of Science titled *"Indoor air: the science of indoor air and pathways to improve indoor air quality in Australia"***, which provides the latest scientific evidence on the issue and explores the policy pathways to improve indoor air quality in Australia. It includes a call for a phased approach to establish enforceable indoor air quality performance standards in public buildings, beginning with monitoring and a workplace reporting standard. The report was officially launched by the Assistant Minister for Health and Aged Care The Hon Rebecca White MP at The Safer Air Project's second annual conference 'Safer Shared Air. Making the Invisible Visible' at Parliament House in Canberra. Academy Fellow, world-leading expert on indoor air and winner of the 2025 Prime Minister's Prize for Science, Distinguished Professor Lidia Morawska FAA FTSE, is the lead expert for the Academy's new report. Download a copy of the report

- On 7 November 2025, **Professor Tunga Salthammer** of the Fraunhofer WKI in Germany, and Adjunct Professor of ILAQH, QUT, gave an invited guest lecture to ILAQH titled "Predicting partition coefficients and vapor pressures of environmentally relevant organic compounds". If you missed out on the webinar, you can now watch it on YouTube.

- On 1 December 2025, **Professor Prashant Kumar** of the Global Centre for Clean Air Research (GCARE) at the University of Surrey, for his presentation titled: "Indoor Environmental Quality in Schools: Actions and Challenges"**.**

- Members of our team (Prof Zoran Ristovski, Prof Kirsten Spann, Dr Robert Groth and Dr Sadegh Niazi) have been **awarded an Australian Research Council (ARC) Discovery Grant** for a project titled: ***"Multiphase droplet chemistry shapes dynamic survival of airborne viruses".*** When viruses are exhaled, they travel in tiny droplets of respiratory fluid, complex microenvironments full of salts, proteins, and other substances that evolve depending on the surrounding air. These droplets don't just carry viruses they shape their survival. Their goal is to uncover the physicochemical dynamics of these droplets to better understand what helps viruses persist in indoor environments. This knowledge is key to designing smarter public health strategies, like improving IAQ and controlling environmental conditions to reduce transmission risks.

- A **new national research facility dedicated to analysing light-responsive molecules and advanced polymer materials will be established at QUT**, following a major investment through the Australian Research Council's (ARC) Linkage Infrastructure, Equipment and Facilities **(LIEF) scheme.** The $1.35 million project, led by Dr David Marshall from the QUT Centre for Materials Science and Central Analytical Research Facility (CARF), will deliver a mass spectrometer designed specifically for real-time, high-precision characterisation of molecules as they undergo photochemical transformations. Other chief investigators from QUT include Professor Stephen Blanksby, Distinguished Professor Christopher Barner-Kowollik, **Associate Professor Branka Miljevic** and Associate Professor Hendrik Frisch.



- THRIVE and QUT (Queensland University of Technology) are **transforming** our 13-year-old Science and Engineering Building (**P Block**) into a "**living laboratory" to demonstrate existing buildings can meet proposed global indoor air quality standards.** This $3.4 million project will integrate advanced sensors, AI, and smart systems to improve public health and influence future building performance standards worldwide. Poor air quality in indoor environments – where research shows people spend up to 90% of their time – contributes to respiratory disease (including asthma and lung cancer), heart disease, infectious disease transmission, and cognitive impairment, in addition to potential impacts from carcinogens. *"Every drop of water we drink and every piece of food we put in our mouth is highly regulated – yet the indoor air, which we take into our lungs 12 times a minute, is not regulated at all." – Distinguished Professor Lidia Morawska*

5. Awards and Achievements

- D/Prof Lidia Morawska was awarded "**The 2024 President's Prize**" from the Australian Institute of Architects on 21 February 2025 at Customs House Brisbane. The President's Prize has been in existence for over 20 years and provides an avenue for the Queensland President to recognize individuals or organizations for their support of the architectural profession.

- **D/Prof Lidia Morawska** was awarded a **Doctorate Honoris Causa** from the LUT in Poland, for her globally significant work in air quality research and its effect on human health and the environment. The award, which recognises outstanding achievements and contributions in fields including science, technology, the economy, and society, was presented on 13 May 2025, following the discussion forum on 12 May 2025 titled, "What our children breathe – air quality in educational institutions", at which she was guest of honour. In honouring Professor Morawska, LUT highlighted the widespread impact her research has had on the world over a career spanning more than three decades. As part of the Doctorate Honoris Causa, LUT has published a book (in Polish and English) that honours her career with reviews of her achievements. Read more from QUT Media | Read more from LUT Media | Watch the ceremony.

- **Dr Alex Mikszewski**, former PhD students who completed his degree in 2024, received the **QUT Outstanding Doctoral Thesis Award for 2024**.

- **Dr Basant Pradhan**, former PhD students who completed his degree in 2024, received the **Faculty of Science Executive Dean's Commendation for Outstanding Doctoral Thesis for 2024.**

- Our Director D/Prof **Lidia Morawska** was elected a **Fellow of the Australian Academy of Technological Sciences and Engineering (ATSE)**, as an *Air pollution paradigm-shifter.* ATSE brings together Australia's leading experts in applied science, technology and engineering to provide advice on how to achieve sustainable solutions.

  "This recognition reflects the importance of science in protecting human health and the environment. I am honoured to contribute to global efforts that make our air cleaner and our spaces safer." – Lidia Morawska

  Read more from QUT Media | See the list of 35 new ATSE fellows

- Our Director, **D/Prof Lidia Morawska was awarded the Prime Minister's Prize for Science 2025 by our Prime Minister The Hon Anthony Albanese MP** in Canberra on **3 November 2025**!

  Distinguished Professor Morawska is an expert in air quality and its impact on human health and the environment. Her pioneering research has transformed how the world understands air pollution and airborne transmission of disease.

  Prof Morawska studies ultrafine particles – tiny pollutants small enough to enter the bloodstream. Her discoveries reshaped the World Health Organization's global air quality guidelines and helped align the European Parliament's Ambient Air Quality Directive for cleaner air across Europe.

  During the COVID-19 pandemic, Prof Morawska led an international group of nearly 240 scientists who showed that the virus spreads mainly through the air. Their work prompted health authorities to recognise airborne transmission and change infection control strategies, helping to save countless lives.

Prof Morawska also investigates how airborne particles behave indoors. Her findings improve air quality in schools, workplaces and public buildings, creating safer and healthier environments.

She is the Director of the International Laboratory for Air Quality and Health at Queensland University of Technology and a Vice-Chancellor Fellow at the University of Surrey's Global Centre for Clean Air Research.

Prof Morawska inspires the next generation of scientists to tackle the world's most pressing challenges.

"*The driving force for my work is scientific curiosity, but my purpose is to improve health, improve lives and improve the wellbeing of society. Science without purpose is not enough. There's still a long way to go – I'm not looking back on what has already been done but looking forward to how much is still to be done.*" *– Lidia Morawska*

More from PM Prize Department | More from QUT Media | Watch the PM Prize Department video

6. Peer Reviewed Publications

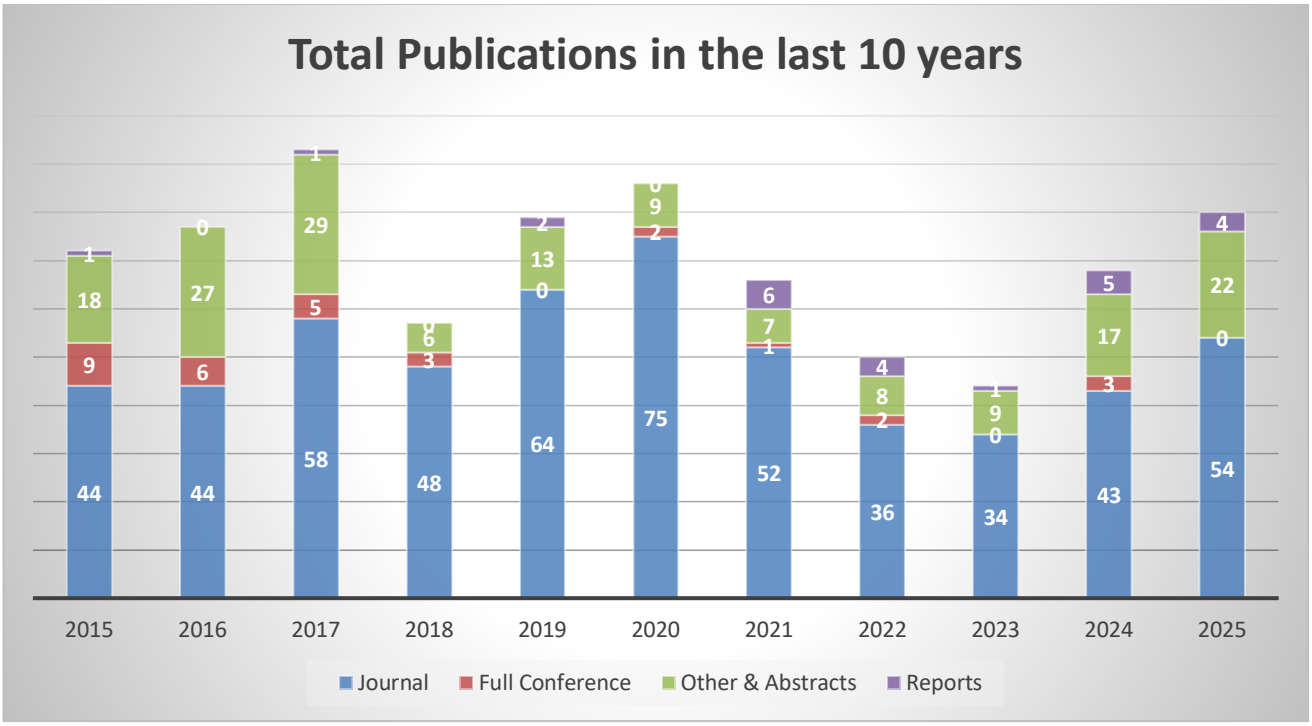


Figure 1. ILAQH Refereed Publications per Year (2015 – 2025)

7. Competitive Grants (Granted)

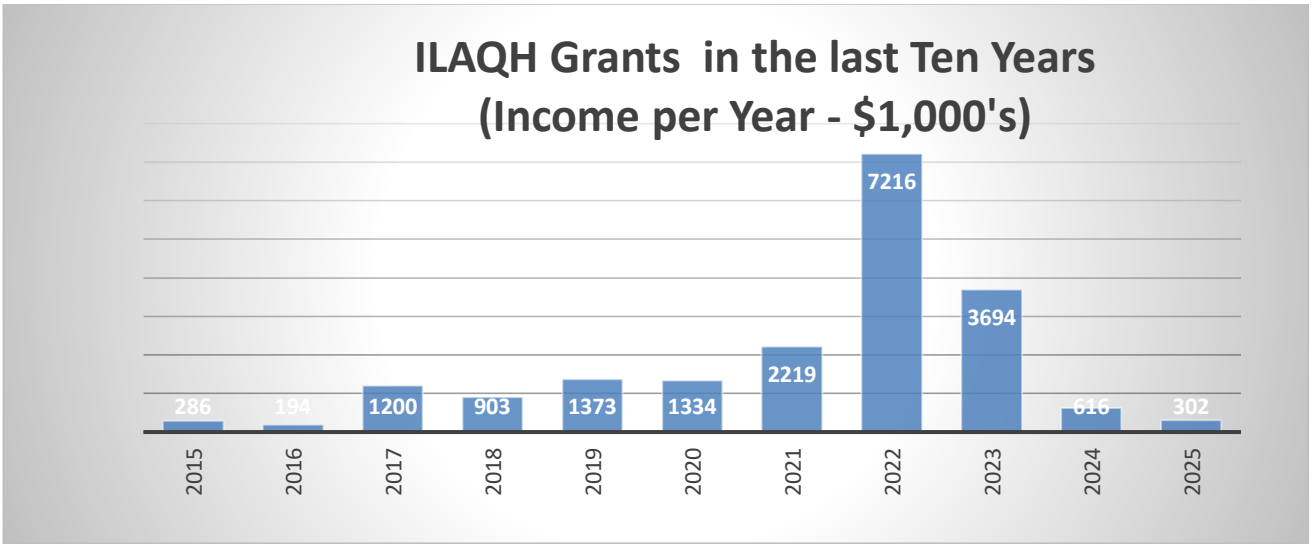


Figure 2. ILAQH grant income distribution per year (2015 – 2025)

Australian Competitive Grants (Awarded)

Project Scheme: **ARC Discovery Projects 2026-2028**
Chief Investigators: Zoran Ristovski, Kirsten Spann, Robert Groth, Sadegh Niaziesfyani, Allen Haddrell
Awarded: $519,100
Project Title: *Multiphase Droplet Chemistry Shapes Dynamic Survival of Airborne Viruses (DP260103172)*

Project Scheme: **QUT Resilience Centre ERC Grant 2025**
Chief Investigators: Zijun Li, Catherine Kim, and Adolfo Lugo Rios
Awarded: $14,500
Project Title: *Mapping surface $PM_{2.5}$ during Australian Bushfire Season using Satellite Optical Depth*

Project Scheme: **QUT Resilience Centre ERC Grant 2025**
Chief Investigators: Jakob Boyd Pernov's
Awarded: $10,000
Project Title: *Improving the GEOS-Chem model for biogenic aerosol processes using Southern Ocean and Antarctic observations and machine learning*

Project Scheme: **Faculty of Science Strategic Research Investment Fund (SRIF)**
Chief Investigators: Zijun Li
Awarded: $17,999
Project Title: *Clean Air for All: Evaluating Environmental Equity in Australian Urban Communities*

8. Other Public Sector / New Consultancy Research Projects Commenced

Administered by external organisations (QUT Co-CI)

Project Scheme: **Kanro**
Chief Investigators: Lidia Morawska, Wendy Miller, Martin Larbi, Henry Oswin, Udita Gupta, Bingnan Zhao
Awarded: $1,520,104
Project Title: *First real-world exemplar of implementing a Blueprint IAQ Standards*

Project Scheme: **Royal Society of Queensland Research Fund 2025**
Chief Investigators: Zijun Li, Zoran Ristovski
Awarded: $5,000
Project Title: *Assessing Healthcare Usage and Cost Due to Bushfire-Related $PM_{2.5}$ in Queensland*

Project Scheme: **Australian Eggs 2025**
Chief Investigators: Jenny-Ann Toribio, Zoran Ristovski, Robert Groth, Peter Durr, Andrew REed
Awarded: $53,000
Project Title: *Avian Influenza Aerosol Generation and Mitigation During Depopulation and Disposal*

Project Scheme: **iugotec Pty Ltd2025**
Chief Investigators: Branka Miljevic
Awarded: $10,000
Project Title: *Practical Application of Real Time Chemical Sensing Technologies to Invasive Pest Detection*

Project Scheme: **State Government of Victoria 2025-2026**
Chief Investigators: Lidia Morawska
Awarded: $15,076
Project Title: *Pathway to Clean Indoor Air in Victoria*

9. Conference Presentations (Keynote/Plenary)

Lidia Morawska

- Invited Plenary Presentation, 'ACIPC Lunch and Learn Webinar', 24 February 2025. Presentation: *Follow up questions from the last webinar*
- Invited Plenary Presentation, 'The 2nd Global Conference on Air Pollution and Health', World Health Organization, Cartagena, Colombia, 25-27 March 2025. Presentation 1: *Overview of the exposure and health effects of ultrafine particles;* Presentation 2: *Overview of Health Impacts of Indoor Air Pollution Exposure: communicable and noncommunicable*
- Invited Plenary Presentation, 'Stanford Forum on Sustainable and Healthy Buildings', Stanford University, 31 March – 1 April 2025. Presentation: *From Science to Policy: mandating indoor air quality for public buildings*
- Invited Plenary Presentation, 'Art-Science Symposium CSA-UTAS event', Centre for Safe Air, Hobart, Tasmania, 2 May 2025. Presentation: *Air quality: ignorance, dogmas and politics*
- Invited Plenary Presentation, '6th Workplace and Indoor Aerosols Conference (WIAC2025)', "Particle Pathways: Exploring the Nexus of Indoor Air Pollution and Airborne Diseases", Gaeta Castle, Gaeta Italy, 6-8 May 2025. Presentation 1: *Evaluation of the Naneos Partector 2 Pro ultrafine particle monitor to support WHO's 2021 good practice statements;* Presentation 2 (Plenary): *Translating scientific knowledge into policies that ensure clean indoor air*
- Invited Plenary Presentation, 'Symposium on air quality in schools', Lublin University of Technology, Poland, 12 May 2025. Presentation: *Dlaczego dobra jakości powietrza wewnątrz jest tak ważna?* Watch the live broadcast of the conference
- Invited Plenary Presentation, 'Honoris Causa Doctorate', Lublin University of Technology, Lublin, Poland, 13 May 2025. Presentation: *The science of air that helps us thrive*
- Invited Plenary Presentation, 'AIRAH Indoor Air Quality Conference 2025, 'AS1668.2, ASHRAE 62, and CO_2 – Is 800 ppm CO_2 a good idea? Or not...', Melbourne, Australia, 25 May 2025. Presentation: *800 ppm CO_2 is a good requirement*
- Invited Plenary Presentation, University in Rzeszow, Poland, 27 May 2025. Presentation 1: *Fascynacja powietrzem: może być zaraźliwa!;* Presentation 2: *Energia, technogia, regulacje: jak z tego zrobić czyste powietrze*
- Invited Plenary Presentation, TPM (Society of Friends of Science), 28 May 2025. Presentation: *Czym oddychają nasze dzieci – jakość powietrza w placówkach edukacyjnych*
- Invited Plenary Presentation, Annual MIST Meeting, Delft, The Netherlands, 2 June 2025. Presentation: *Seven lessons from the COVID-19 pandemic for ventilation and indoor air quality: did we have to learn them the hard way?* More information about this year's event. Meet the core research team leading MIST's scientific and outreach efforts and discover the network of collaborating partners contributing their expertise from across sectors.
- Invited Plenary Presentation, 'Workshop 636: "Ventilation and air cleaning: a new era begins", Healthy Buildings 2025 (HB2025) Conference, Reykjavik, Iceland, 8-11 June 2025. Presentation: *Ventilation and air cleaning: a new era begins*
- Invited Plenary Presentation, 'Women in Research Webinar: Good Writing and Publishing Habits – Strategies for Being Productive' Curtin University, Perth, Australia, 26 June 2025. Presentation: *How to write a good paper?*
- Invited Plenary Presentation, 'Pathogen air sampling symposium', Burnet Institute, Level 3 Djeembana Seminar Room, Melbourne, Victoria, 28 July 2025. Presentation: *Understanding and reducing the spread of respiratory pathogens through the air*
- Invited Plenary Presentation, 'WELL Summit', International WELL Building Institute, Sydney, New South Wales, 20 August 2025. Presentation: *Resilience and response in the face of IEQ threats*

- Invited Plenary Presentation, 'ACTRA-SETAC (AU) Meeting', The Australian College of Toxicology & Risk Assessment and SETAC AU, Wellington, New Zealand, 25-28 August 2025. Plenary Presentation: *From Science to Policy: mandating indoor air quality for public buildings;* Keynote Presentation: *Airborne microplastics: their origins and characteristics*

- Invited Plenary Presentation, 2025 Webinar/Conference 'Combating Infectious Disease Challenges; Have we gone twenty steps forward or backwards?', 20th Annual Conference Combating Infectious Disease Challenges, Health Watch USA 2025, 29 August 2025. Presentation: *Understanding and reducing the spread of respiratory pathogens through the air*

- Invited Plenary Presentation, 'Building Contract Management (BMC) Category Council Meeting', Albert Street, Brisbane, Australia, 3 September 2025. Presentation: *From Science to Policy: mandating indoor air quality for public buildings*

- Invited Plenary Presentation, 'Healthy Indoor Air: A Global Call to Action', United Nations General Assembly, New York, USA, 23-24 September 2025. Presentation: *3-minute speech. Watch the recording of the session*

- Invited Plenary Presentation, '2025 Clean Indoor Air for ALL Conference', Clean Air Society of Australia and New Zealand (CASANZ), Melbourne, Australia, 13-15 October 2025. Plenary Presentation Opening: *Indoor Air in Australia: past and present;* Plenary Presentation Closing: *Indoor Air in Australia: future*

- Invited Plenary Presentation, 'Safe Work Month 2025', The University of Queensland, Brisbane, Australia, 31 October 2025. Presentation: *State of Indoor Air in Australia*

- Invited Presentation, 'Prime Ministers Prize for Science 2025 Awards', Canberra, Australia, 3 November 2025. Presentation: *Acceptance speech*

- Invited Plenary Presentation, 'Safer shared air: Making the invisible visible' conference, Parliament House Theatre, Canberra, ACT, 5-6 November 2025. Presentation*: State of Indoor Air and Academy Report*

- Invited Plenary Presentation, 'ACC-AQSM Annual Meeting', 27-28 November 2025. Presentation: *ACC-AQSM*

Zoran Ristovski

- Invited Speaker at the RAP2025 Crete, Greece International Conference on Radiation Applications, 26-30 May 2025.

Branka Miljevic

- Invited Plenary Speaker at the RiChem2025 conference in Rijeka, Croatia, July 2025.

Hamesh Patel

- Invited Presentation, 'Clean Air Society of Australia and New Zealand NZ Branch Technical Meeting', June 2025. Presentation title: *Measuring Black Carbon in Urban Environments: A Key Tool for Source Identification and Improved Air Quality Management*

- Invited Presentation, 'UConn Health - School of Medicine Seminar Series', May 2025. Presentation title: *Use of Scanning Electron Microscopy for Air Pollution Analysis – Studies from New Zealand*

- Invited Presentation, 'National Air Quality Working Group Meeting', March 2025. Presentation 1 title: *PM Speciation & Source Attribution.* Presentation 2 title: *Black Carbon Monitoring in New Zealand*

Henry Oswin

- Invited Presentation, 'Pathogen air sampling symposium', Burnet Institute, Level 3 Djeembana Seminar Room, Melbourne, 28 July 2025. Presentation title: *Overview of air sampling approaches and devices.*

10. Activities – Other

Lidia Morawska

- 2025 – 26 Pre-Budget Submission: A "**Clean Indoor Air for Australians**" National Strategy. Submitted by D/Prof Lidia Morawska on behalf of THRIVE, the Australian Research Council Training Centre for Advanced Building Systems Against Airborne Infection Transmission (THRIVE) and its partners.

- Our Director D/Prof Lidia Morawska, is named **co-chair** of the **Global Commission on Healthy Indoor Air**, an initiative led by the International WELL Building Institute to combat the worldwide indoor air crisis, announced at the United Nations General Assembly first-ever high-level side event on IAQ '**Healthy Indoor Air: A Global Call to Action**' on 23 September 2025. As co-chair, D/Prof Morawska will help lead the Commission in advancing a Global Framework for Action and catalysing the development of national blueprints to strengthen IAQ efforts around the world. The Commission will:

  - Elevate a global call to action that places healthy indoor air at the forefront of public health and policy priorities.
  - Build global awareness by highlighting the urgent human and economic costs of unhealthy indoor air.
  - Establish a Global Framework for Action with clear prescriptions across key pillars of market transformation.
  - Catalyse country-specific National Blueprints in collaboration with local stakeholders.

- The Commission's Global Framework for Action will be released by the end of 2026, alongside National Blueprints published on a rolling basis. Find more information on the Commission | Download overview | Watch the recording of the event

- On 5 November 2025, a **meeting** took place with the **Minister's Advisor Mark Nelson (Office of the Hon Amanda Rishworth MP)** to discuss protecting workers and others from poor quality indoor air in workplaces. The four-person delegation that we part of the meeting included: our Centre Director D/Prof Lidia Morawska (Queensland University of Technology), John Byron (Queensland University of Technology), Liam O'Brien (The Australian Council of Trade Unions), Marie Boland (Safe Work Australia), Nicholas Burt (Facilities Management of Australia), and Bronwyn King (Burnet Institute).

Hamesh Patel

- Elangasinghe, A.; Patel, H.; Dirks, K. N.; Hamilton, A; Fan, W; Chen, C; Talbot, N; Lim. S; Brook, M.; Wells, B.; Williams, D. E.; Davy, P; Pattinson, W.; Salmond, J. A; (2025). 'An Innovative Automated Scanning Electron Microscope Methodology for Quantifying Airborne Elongated Mineral Particles'. Presented at the Air & Waste Management Conference, Annual Conference & Exhibition, Raleigh, USA.

- Patel, H.; Davy, P.; Tollemache, C.; Talbot, N.; Salmond, J.A.; Williams, D.E.; (2025). 'A Novel Methodology for Determining the Efficacy of Interventions Targeting Urban Air Pollution Hotspots'. Presented at the Air & Waste Management Conference, Annual Conference & Exhibition, Raleigh, USA.

- Patel, H.; Davy, P.; Tollemache, C.; Talbot, N.; Salmond, J.A.; Williams, D.E.; (2024). 'Determining the Elemental and Chemical Composition of Ambient Particulate from a Port City (Auckland, New Zealand)'. Presented at the Air & Waste Management Association, Freight & Environment: Ports of Entry Conference, Corpus Christi, USA.

11. Media Appearances

Lidia Morawska

Many media appearances / interviews, for example:

- **The Australian Academy of Science** on 1 December, "**2025 in review: a future focus for Australian science**"
- **Mirage News** on 19 November, "**QUT Sustainability Innovation Lauded Nationally**"
- **Climate Control News** by Sandra Rossi on 12 November, "**IAQ call to action**"
- **Nature** on 10 November, "**Meditations from an air quality master**"
- **ABC Radio National – Sunday Extra** with Julian Morrow, on 9 November, "**Prime Ministers Prize for Science 2025 award**"
- **RRR Radio** with Dr Vyom Sharma on 9 November, "**Prime Ministers Prize for Science 2025 award**"
- **ABC Radio Adelaide mornings** with Paul Gough on 7 November, "**Prime Ministers Prize for Science 2025 award**"
- **4BC Breakfast Radio** with Sofie Formica on 6 November, "**Prime Ministers Prize for Science 2025 award**"
- **ABC Radio Sydney** with Renee Krosch on 6 November, "**Prime Ministers Prize for Science 2025 award**"
- **The Australian Academy of Science** on 5 November, "**Time to act to improve the air we share indoors**"
- **AusDoc** with Jamie Thannoo on 5 November, "**Prime Ministers Prize for Science 2025 award**"
- **ABC Radio Adelaide mornings** with Rory McClaren on 5 November, "**Prime Ministers Prize for Science 2025 award**"
- **7 News Brisbane** Afternoons Program with Marlina Whop on 4 November, "**Prime Ministers Prize for Science 2025 award**"
- **Women's Agenda** on 4 November, "**Distinguished Professor Lidia Morawska awarded $250,000 Prime Minister's Prize for Science**"
- **Chanel 7** with Nats Levi on 4 November, "**Prime Ministers Prize for Science 2025 award**"
- **Chanel 10** with Lawrence Jeffcoat on 4 November, "**Prime Ministers Prize for Science 2025 award**"
- **ABC AM** with Alison Xiao on 4 November, "**Prime Ministers Prize for Science 2025 award**"
- **ABC Radio Brisbane Breakfast** with Craig Zonca and Loretta Ryan on 4 November, "**Prime Ministers Prize for Science 2025 award**"
- **ABC Radio National** with Robyn Williams, Breakfast program on 3 November, "**Prime Ministers Prize for Science 2025 award**"
- **QUT Media Release** on 4 November, "**Prime Ministers Prize for Science 2025 award**"
- **ABC News Online** with Olivia Willis, on 3 November, "**Aerosol physicist Lidia Morawska wins 2025 Prime Minister's Prize for Science**"
- **The Australian Academy of Science** on 3 November, "**Academy Fellow receives top national science prize**"
- **The Courier Mail** with Ellen Ransley on 3 November, "**Qld scientist recognised for world-changing Covid breakthrough**"
- **Senator the Hon Tim Ayres, Minister for Industry and Innovation and Minister for Science** on 3 November, **"Celebrating the 26th Prime Minister's Prizes for Science**"
- **Australian Government, Department of Industry, Resources and Sciences** on 3 November, "**2025 Prime Minister's Prize for Science**" with **YouTube video highlights**.
- **QUT Real Focus and The Conversation** on 31 October, "**Darwin residents are worried about toxic chemicals and gas leaks. We need laws to protect clean air**"
- **Australian Associated Press | The Mercury Lithgow | The Border Mail | Canberra Times** with Tom Wark on 31 October, "**Science awards put Aussie pioneers in rarefied air**"
- **The Guardian** with Donna Lu, Assistant Editor, Climate, Environment and Science on 30 October, "**Australian scientist who alerted world that Covid is airborne wins top science prize**"
- **The Australian** with Natasha Bita, Education Editor on 30 October, "**Australian Prime Minister's Prizes for Science 2025: full list of winners**"
- **Sky News** with Julia Seymour on 27 October, "**Prime Ministers Prize for Science 2025 award**"

- **Education HQ** with Grant Quarry on 23 October, "**Not cool: little movement in addressing poor indoor air quality in our schools**"
- **AIRAH HVAC&R News** on 22 October, "**New campaign prioritises indoor air quality**"
- **Body + Soul** with Hayley Hinze on 21 October, "**Does burning candles indoors harm your air quality? Experts explain**"
- **Phys.org** by Lisa Lock on 14 October, "**Australia's first national report on indoor air quality reveals urgent need for action**"
- **QUT Media Release** on 14 October, "**Australia's first national report on indoor air quality reveals urgent need for action**"
- **The Australian Academy of Science** on 13 October, "**Speech: Academy Chief Executive on the State of Indoor Air in Australia report**"
- **Cosmos Magazine** with Matthew Agius on 5 October, "**The unseen killer particles we breathe**"
- **The Australian Academy of Science** on 30 September, "**Message from the President**"
- **QLD's Regional Drive Radio Show** on 30 September, "**UN Side Event on Indoor Air Quality**"
- **Morning Star** on 26 September, **"From Australia to the World: The Scientist Leading a Movement for Healthy Indoor Air**"
- **The Safer Air Project** on 25 September, "**Australian Public Health Advocate to Lead Global Air Quality Commission**"
- **AIRAH HVAC&R News** on 24 September, "**Australia leads IAQ action at Climate Week**"
- **Morning Star** on 24 September, "**Global Commission on Healthy Indoor Air Launches at the United Nations To Drive Action To Improve Indoor Air**"
- **Australian Academy of Technological Sciences & Engineering (ATSE)** on 24 September, "**Game-changing Australians join prestigious ATSE Fellowship**"
- **QUT Media Release** on 24 September, "**Three QUT researchers named ATSE Fellows**"
- **Air Quality Matters Podcast** with Simon Jones on 23 September, "**From the UNGA Side Event on Indoor Air Quality**"
- **QUT Media Release** on 23 September, "**QUT world indoor air expert speaks at UNGA event & co-leads global commission**"
- **The Australian Academy of Science** on 18 September, "**Australia to lead first-ever United Nations indoor air quality global pledge**"
- **The Australian Academy of Science** on 18 September, "**The case for clean indoor air**"
- **ABC Radio** on 19 August, "**23 big ideas to boost Australia's productivity**"
- **ABC News** on 18 August, "**23 big ideas to boost Australia's productivity**"
- **Podcast interview for Air Necessities** on 14 August.
- **World Socialist Web Site** on 8 August, "**Poor classroom air quality endangers students and educators in Australia**"
- **Julienne van Loon** on 14 July.
- **TU Delft** with Isabelle Elias on 2 June, "**Five years since Covid: are we prepared for a future virus outbreak?**"
- **De Ingenieur** on 3 June, "**Fighting respiratory infections in buildings**"
- **Studio Rzeszów** on 26 May, "**Talks Rzeszów Info. Professor Lidia Morawska**"
- **Zycie Podkarpackie** on 15 May, "**Professor Lidia Morawska with an honorary doctorate from the Lublin University of Technology**"
- **QUT Press Releases** on 15 May, "**Prestigious prize for international air quality expert**"
- **Forum Akademickie** on 14 May, "**Prof. Lidia Morawska uhonorowana przez Politechnikę Lubelską**"
- **Kurier Lubelski** on 14 May, "**She is among the 100 most influential people according to Time. She received the title of doctor honoris Causa of the Lublin University of Technology**"
- **Przemyśl Naszemiasto** on 14 May, "**Prof. Lidia Morawska awarded an honorary doctorate from the Lublin University of Technology**"
- **Lublin University of Technology News** on 13 May, "**Prof. Lidia Morawska with the title of Doctor Honoris Causa of the Lublin University of Technology**"
- **Wyzsze Szkola** on 9 May, "**Prof. Lidia Morawska will talk about air quality and its impact on our lives**"
- **Standford Daily News** on 20 April, "**Experts call for action on indoor air quality standards at inaugural summit**"
- **The Australian Academy of Science** on 17 April, "**Global Talent Attraction Program**"
- **Climate Control News** by Sandra Rossi on 12 March, "**Few countries meet WHO guidelines**"

- James Hasler-Bail on 24 February, "**Fossil Fuel Advertising Documentary**"
- **Medical Republic** with Mariella Attard on 13 February, "**How to stop your waiting room going viral (in a bad way)**"
- **Air Quality Matters Podcast** with Simon Jones on 6 February.
- **The New York Times** with Carl Zimmer on 4 February, "***¿Podría la gripe aviar propagarse por el aire?***"
- **Aventine** with Jamie Condliffe on 29 January, "**Future pandemics**"
- **ABC Ballarat** with Debbie Rybicki on 15 January, "**A new animal shelter facility that has infection control mechanisms**"
- **New Scientist** by Michael LePage on 1 January, **"Will there be another pandemic after covid-19 and are we prepared?"**

12. Visitors

- Mr Yang Xiao, Visiting Research Student, Jinan University, Guangzhou, China, 1 December 2023 – 1 July 2025
- Ms Jicui Cui, CSC Visiting Research Student, Shanghai Jiao Tong University (SJTU), 20 February 2024 – 20 February 2025
- Ms Alícia Josa Culleré, Visiting Research Student, Barcelona Institute for Global Health (ISGlobal), 23 September 2024 – 23 March 2025
- Adjunct Professor Tunga Salthammer, Fraunhofer WKI, Germany, 15 November 2024 – 15 February 2025
- Associate Professor Yael Dubowski, Technion, Israel Institute of Technology, 27 January 2025 – 10 February 2025
- Professor Pitor Grzybowski, 7 February 2025
- Professor Paul Jagals, University of Queensland with Prof Atsuko Ikeda and Dr Yu At-Bahmai from Hokkaido University, Japan, 12 February 2025
- Dr Xiangdong Li, The University of Melbourne, 17-21 February 2025
- Prof Kerri Pratt and A/Prof Andrew Ault, Visiting Fullbright Scholars, Department of Chemistry, Department of Earth & Environmental Sciences, University of Michigan, 19-20 March 2025
- Dr Hamesh Patel, Visiting Research Fellow, Mote New Zealand, 3-4 April 2025
- Mr Antoine Geray, Visiting Research Student at Polytech Clermont, France, 1 April 2025 – 31 July 2025
- Prof Yuan-Chung (Oliver) Lin, Distinguished Professor, National Sun Yat-sen University, Taiwan, 11 April 2025
- A/Prof Xuying Ma, Visiting Research Fellow, Xi'an University of Science and Technology, China, 10-20 April 2025
- Mr Ren Paulo Estaquito, Visiting Research Fellow, University of Queensland, 14-25 April 2025
- Dr Guntur Dharma Putra and Mr Muhammad Shidiq, Artificial Intelligence Research Group, Faculty of Engineering, Gadjah Mada University, Indonesia, 27 June 2025
- Prof Sakiko Ishino, Kanazawa University, Japan, 2 July – 2 August 2025
- Prof Rikke Jørgensen, Norwegian University of Science and Technology, Norway, 6-20 August 2025
- Dr Tobias Kramer, Postdoctoral Researcher, Center for the Built Environment (CBE), University of California, Berkeley, USA, 6 August 2025
- Professor Huang Liu, Tsinghua University, China, 15 August 2025
- Mr Liam Bates, CEO and Co-Founder of Kaiterra, USA, 20 August 2025
- Ms Yao XIAO, Visiting Research Student, The University of Sydney, 22 August 2025
- Mr Kazukiyo Kumagai, Air Quality Section Chief, California Department of Public Health, USA, 2 September 2025
- Dr Andrea Milinkovic, Visiting Research Fellow, Ruđer Bošković Institute in Zagreb, Croatia, 29 September – 17 November 2025
- Adjunct Professor Giorgio Buonanno, University of Cassino and Southern Lazio, Italy, 8-10 October 2025
- Chair Professor and Global STEM Professor Qingyan "Yan" Chen, Director of PolyU Academy for Interdisciplinary Research (PAIR), The Hong Kong Polytechnic University (PolyU), 17 October 2025
- Adjunct Professor Tunga Salthammer, Fraunhofer WKI, Germany, 17 October – 7 November 2025
- Dr Meng (Simon) Xiu, Visting Postdoctoral Research Fellow, Chengdu University of Information Technology, China, 17-20 October 2025
- Dr Hamesh Patel, Visiting Research Fellow, Mote New Zealand, 27-31 October 2025
- Dr Yiqun Wang, Visiting Research Fellow, State Key Laboratory of Advanced Environmental Technology, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, 28 October – 31 December 2025
- Brock Lennox, VRES Student, Queensland University of Technology, November 2025 – February 2026.
- India Mucek, VRES Student, Queensland University of Technology, November 2025 – February 2026.
- Arran Middleton, VRES Student, Queensland University of Technology, November 2025 – February 2026.
- Retief Padget, VRES Student, Queensland University of Technology, November 2025 – February 2026.
- Mr David Anene, Visiting Research Student, Deakin University, 17-21 November 2025.
- Professor Prashant Kumar, GCARE, University of Surrey, 27 November – 2 December 2025
- Professor Heidi Salonen, Adjunct Professor, Aalto University, Finland 2-27 December 2025.