



International Laboratory for Air Quality and Health

WHO Collaborating Centre

ANNUAL REPORT 2024

**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 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 (2021) has set new directions for air pollution management and, includes UFP, 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 UFP 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-Chaired this); *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 Emergency Outbreak Response Groups (e.g., 2003 SARS, and COVID-19). During the COVID-19 pandemic she was invited by the WHO Chief Scientist and the WHO COVID-19 technical lead to contribute to the "WHO Global Multi-Disciplinary Discussion Forum on SARS-CoV-2 Modes of Transmission"; and by the Director of Environment, Climate Change and Health Department, 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 a number of WHO guidance/recommendation documents on COVID-19, such as the 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); and 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 'Through-The-Air-Transmission (TTAT) Technical Consultation Group', and contributed to an important WHO document titled, "Global technical consultation report on proposed terminology for pathogens that transmit through the air" (18 April 2024); and the WHO Health Emergencies Program (WHE) 'ARIA - Airborne Risk Indoor Assessment – Technical Working Group', led by Dr. Luca Fontana and co-chaired by Prof Morawska, a report was published 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 2024, Prof Morawska was invited by the WHO as a consultant on air pollution, to participate in the following activities:

- Has been participating in the work of the GAPH-TAG 'Meeting of the Global Air Pollution and Health - Technical Advisory Group – Expert Working Group on Desert Dust and Health'. A meeting was hosted by the Geneva office on 1 February 2024. This work is continuing.

- Participated in the meeting 'Briefings for WHO Collaborating Centres on WHO's draft 14th General Programme of Work (GPW14), 2025-2028', 14 February 2024. Reviewed the draft '*WHO's new draft Strategy for Global Health 2025-2028*'.
- Continuation of the WHO Health Emergencies Program (WHE) 'ARIA - Airborne Risk Indoor Assessment – Technical Working Group', led by Dr. Luca Fontana, co-chaired by Lidia Morawska. A report was published in 2024:
WHO (inc. Morawska, L.), 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. World Health Organization. License: CC BY-NC-SA 3.0 IGO.
<https://iris.who.int/handle/10665/376346>
- Participated in a meeting with Dorota Iwona Jarosinska to discuss 'UFP monitoring in the context of WHO GPS' on 15 February 2024.
- As part of her participation in the 'Through-the-air transmission (TTAT)' Technical Consultation Group Meetings, contributed to the "[Global technical consultation report on proposed terminology for pathogens that transmit through the air](#)" which was published 18 April 2024.
- Participated and gave a virtual presentation in the '27th Meeting of the Joint Convention/WHO Task Force on the Health Aspects of Long-range Transboundary Air Pollution', Bonn, Germany, 22-23 May 2024. Presentation title: "*Ultrafine particles monitoring to support WHO 2021 UFP Good Practice*".
- Has been contributing to the 'Science and Policy Snapshot: Input to the 2024 WHO conference on air pollution, energy access and health' and 'Exposure to ambient air pollutants – summary of health damaging air pollutants' specifically in the section SPS on indoor air pollutants.
- Has been participating in the continuous work of the '2nd meeting of the Expert group on influenza research agenda review – Stream 2: Limiting the spread of pandemic, zoonotic and seasonal epidemic influenza'. A meeting was held on 23 May 2024, and she is contributing to the writing/review of a chapter.
- Participated in the 'WHO Meeting for The Update Of The Public Health Research Agenda For Influenza', WHO HQ Geneva, Switzerland, 27-29 August 2024.
- Participated in the WHO video series on air pollution and health: Examine the origins and reasons for concern about ultrafine particles, underlining the importance of addressing these minuscule pollutants. <https://www.youtube.com/watch?v=CEi4zm1o27A>

3. ILAQH Researchers in 2024

Director

Distinguished Professor Lidia Morawska, PhD

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 Henry Oswin

Dr Jakob Pernov

Dr Juha-Matti Sulo

Dr Robert Groth

Dr Magdalena Okuljar

Dr Zijun Li

Associated Academic Adjunct Staff

Adjunct Professor Giorgio Buonanno (University of Cassino, Italy)

Adjunct Professor Hai Guo (Hong Kong Polytechnic University, Hong Kong)

Professor Clinton Fookes (Faculty of Engineering, QUT)

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 Phong Thai (University of Queensland)

Associate Professor Helen Thompson (School of Mathematical Sciences, QUT)

Adjunct Professor Hao Wang (Jinan University, China)

Training Centre Manager – ITTC

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)

Behnaz Alinaghipour (Supervisor: Zoran Ristovski with Branka Miljevic)

Bingnan Zhao (Supervisor: Lidia Morawska)

Dilani Madhubhashini (Supervisor: Lidia Morawska)

Harsh Raj Mishra (Supervisor: Zoran Ristovski with Branka Miljevic)

Haydn Trounce (Supervisor: Zoran Ristovski with Branka Miljevic)

Justine Hupkes (Supervisor: Richard Brown with Lidia Morawska)

Lingli Guo (Supervisor: Lidia Morawska)

Qing Guo (Supervisor: Godwin Ayoko with Zoran Ristovski)

Parwapath (Patty) Phunthirawuthi (Supervisor: Lidia Morawska)

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: Lidia Morawska)
Savinda Heshani (Supervisor: Lidia Morawska with Rohan Jayaratne and Clinton Fookes)
Udita Gupta (Supervisor: Lidia Morawska)
Yik Sze Lau (Supervisor: Branka Miljevic with Zoran Ristovski)
Zachary Brown (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)
Christina Higgins (Supervisor: Prashant Kumar, University of Surrey with Lidia Morawska)
Lisa Coulbourn (Supervisor: Wendy Miller 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)
Samuel Gordon Putland (Supervisor: Branka Miljevic with Zoran Ristovski)

Honours Students

None

Postgraduate Completions, PhD

Alexander Mikszewski (Supervisor: Lidia Morawska)
Basant Pradhan (Supervisor: Lidia Morawska with Rohan Jayaratne)
Jimmy Hilly (Supervisor: Andrew Dansie UNSW with Lidia Morawska)
Priyanka Arora (Supervisor: Zoran Ristovski)

Postgraduate Completions, Masters

None

Destination of our Graduates (Current Positions)

Academic Positions in Top International Universities / Organisations



4. Major Research Highlights

- Contributions to the '[Effectiveness of germicidal ultraviolet Light in an Upper room Configuration In Decreasing COVID-19 in Aged-care Residential facilities \(ELUCIDAR\)](#)'. The Victorian Department of Health is exploring innovative strategies to reduce the transmission of respiratory viruses in residential aged care facilities, such as COVID-19 and influenza. As part of this work, we will conduct a clinical trial to see if upper room germicidal ultraviolet lighting can decrease levels of COVID-19 in Victorian residential aged care facilities. For more information how [germicidal ultraviolet light – combatting airborne virus transmission](#) works.
- Submission to the [National Urban Policy for Australia](#). The Australian Government are developing a National Urban Policy on the role that all levels of government, industry and the community can play in improving Australian cities and suburbs. Submission on behalf of Thrive.
- Dr Zijin Li was involved in a ground-breaking, interdisciplinary study led by the University of Eastern Finland. The study highlighted the role of plant-derived secondary organic aerosols (SOAs) in mediating plant-plant interactions and their potential ecological and evolutionary function in large ecosystems. In the study, he was responsible for real-time measurements of plant volatiles using an online mass spectrometer (PTR-MS). These measurements were critical in reflecting the response of the SOA-mediated plants to herbivores. The findings of the study were published in *Science*, and the details can be found in [Biogenic secondary organic aerosol participates in plant interactions and herbivory defense | Science](#).
- Professor Morawska made an important contribution of the WHO Health Emergencies Program (WHE) 'ARIA - Airborne Risk Indoor Assessment – Technical Working Group', led by Dr. Luca Fontana, co-chaired by Lidia Morawska. A report was published in 2024:

WHO (inc. Morawska, L.), 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. World Health Organization. License: CC BY-NC-SA 3.0 IGO. <https://iris.who.int/handle/10665/376346>.

- Professor Morawska made an important contribution in the 'Through-the-air transmission (TTAT)' Technical Consultation Group Meetings, contributed to the "[Global technical consultation report on proposed terminology for pathogens that transmit through the air](#)" which was published 18 April 2024.
- Development of "**A Clean Indoor Air for Australians National Strategy**" following the THRIVE Satellite Event held at QUT on 18 July 2024, titled, "*Science for Action: Changing the world in small steps*". This was presented to **The Honourable Anthony Albanese MP, Prime Minister of Australia** in a meeting with Prof Morawska and other colleagues, at Australian Parliament House on 19 August 2024.
- A major new paper was published in *Science*, titled "Mandating indoor air quality for public buildings" (<https://doi.org/10.1126/science.adl0677>). This is a consensus of a large international team, and we expect it to have a major impact on changes in the regulatory approach to indoor air quality. You can find our QUT story here: [QUT - Blueprint for mandating indoor air quality for public buildings in form of standards](#). And a links to the paper on QUT ePrints: [Mandating indoor air quality for public buildings | QUT ePrints](#).

5. Awards and Achievements

- Distinguished Professor Lidia Morawska's work was recognised in Monte Carlo on 7 November, where she was presented with the [2024 Planetary Health Award from the Prince Albert II of Monaco Foundation](#) for her "outstanding scientific work on air quality and its impact on human health and the environment". The Planetary Health Awards honour key international figures and organisations, with only three recipients each year. Lidia attended the Monte Carlo ceremony and was presented with the award by HRH Prince Albert II.



- [Professor Lidia Morawska has been elected an International Honorary Member of the American Academy of Arts and Sciences](#). This great honour signifies the high esteem in which Lidia is held by leaders in her field and members of the Academy.
- Congratulations to Distinguished Professor Lidia Morawska for being named in [ABC's The Science Show's Top 100 Australian Scientists](#).
- Mr Basant Pradhan, PhD student, received the CASANZ QLD Branch Student Air and Environment Award for 2024.



6. Peer Reviewed Publications

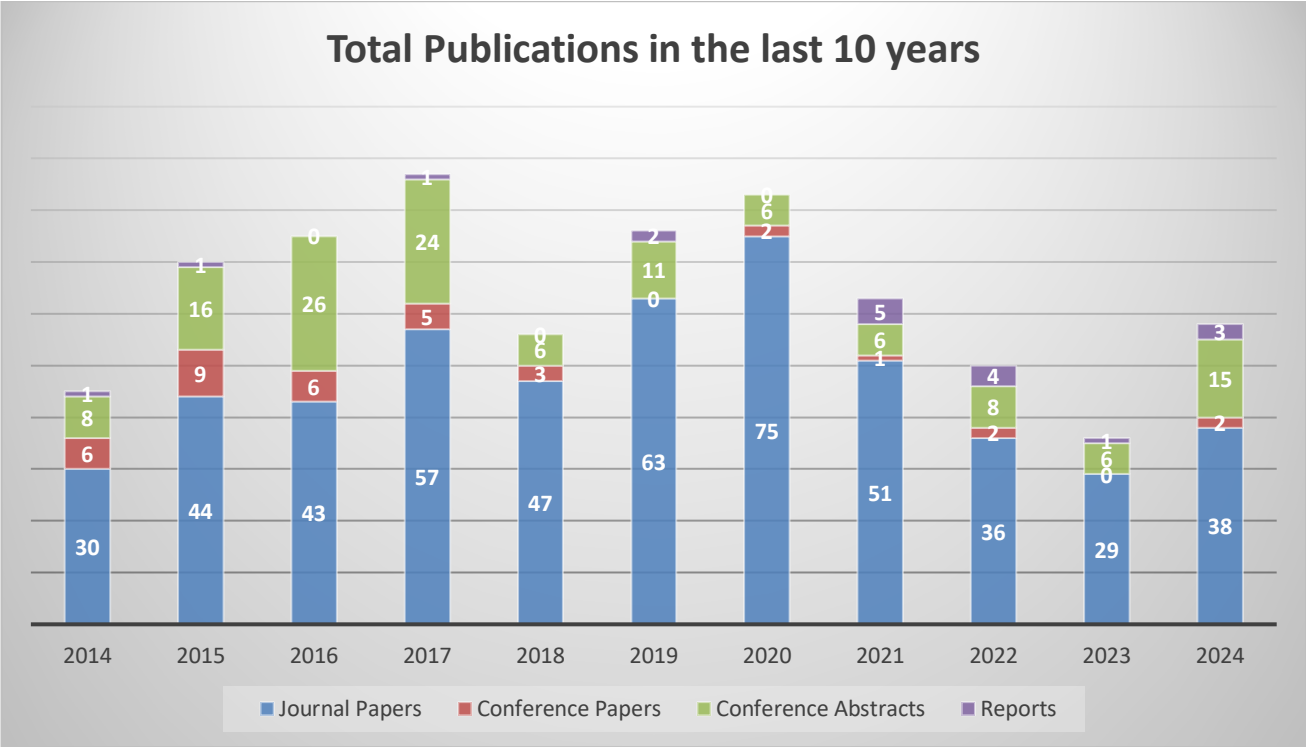


Figure 1. ILAQH Refereed Publications per Year (2014 – 2024)

7. Competitive Grants (Granted)

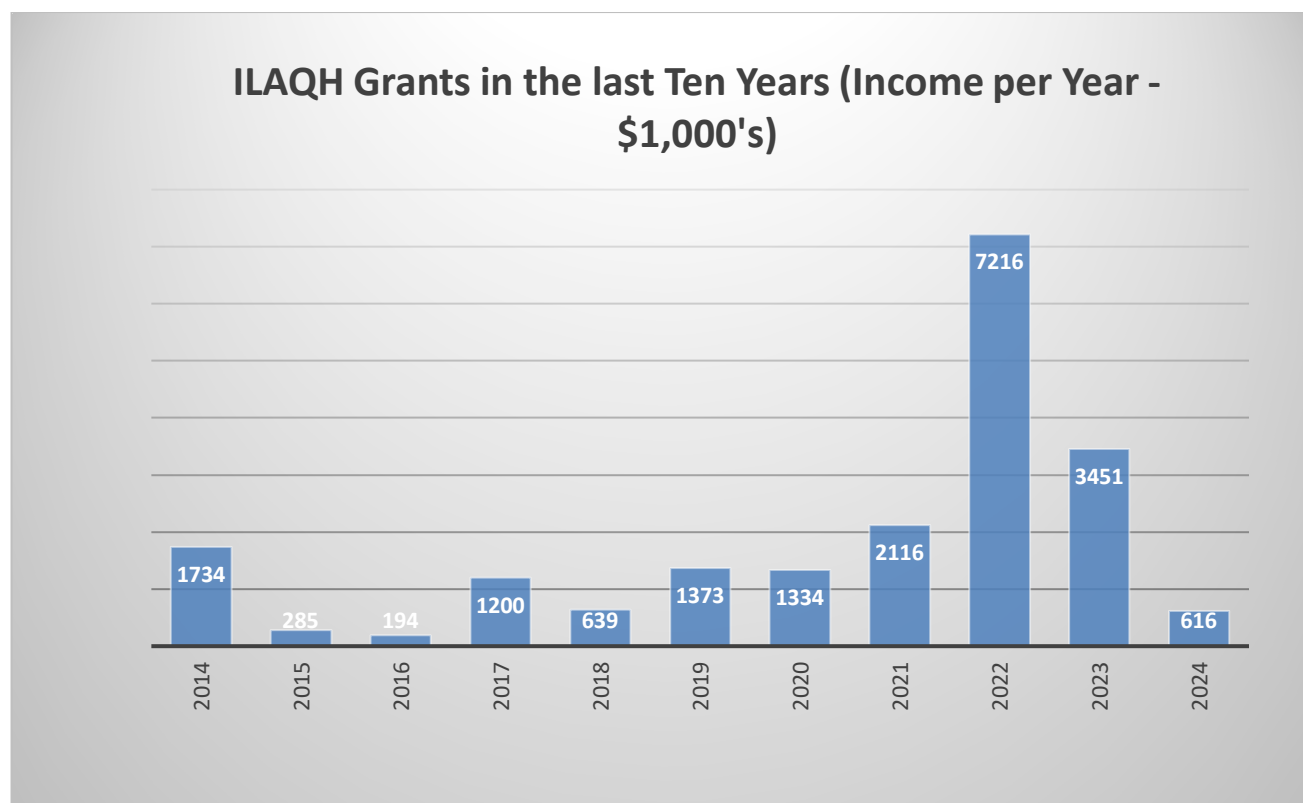


Figure 2. ILAQH grant income distribution per year (2014 – 2024)

Australian Competitive Grants (Awarded)

Administered by external organisations (QUT Co-CI)

Project Scheme: ARC Discovery Projects Grant (2024-2027)

Chief Investigators: Zuduo Zheng, Jiwon Kim, Michiel Bliemer, Lidia Morawska, Hesham Rakha, Cathy Wu

Awarded: \$687,578 (\$105,310.00 to QUT)

Project Title: *Safe and efficient eco-driving using connected and automated vehicles (DP240102189)*

8. Other Public Sector / New Consultancy Research Projects Commenced

Administered by external organisations (QUT Co-CI)

Project Scheme: Victorian Government

Chief Investigators: Jason Monty, Lidia Morawska, Andrew Stewardson, Simon Joosten, Guy Marks, Brendan Crabb, Suman Majumdar, Bronwyn King, Ryan Barwood, Nick Scott

Awarded: \$9,870,000

Project Title: *Pathway to Clean Indoor Air*

9. Conference Presentations (Keynote/Plenary)

Lidia Morawska

- Invited Plenary Presentation, 'Air Talks 2024', Australia and New Zealand Aerosol Assembly (ANZAA) for the Clean Air Society of Australia and New Zealand (CASANZ), 1 March 2024. Presentation: *State of science for particulate matter health effects: Setting research priorities*
- Invited Plenary Presentation, 'The Science of Clean Indoor Air – advances, gaps and opportunities', Parliament House, Canberra, ACT, 18-19 March 2024. Presentation 1: *Indoor Air: what to measure and why*; Presentation 2: *Indoor Air achievements*
- Invited Plenary Presentation, Workshop 'Enabling Accountability for the Assessing the Transmission of Infectious Aerosols in the Indoor Environment: Next Steps for Future Research and Policy', Johns Hopkins Center for Health Security, Baltimore Maryland, USA, 4-5 April 2024. Presentation: *Generation of particles during respiratory activities*
- Invited Plenary Presentation, 'World Health Summit Regional Meeting 2024', Melbourne Convention and Exhibition Centre (MCEC), Melbourne, Victoria, 22-23 April 2024. Presentation: *It is time to mandate indoor air quality for public buildings!*
- Invited Plenary Presentation, 'MIT Guest Lecture, Fluids and Diseases', Massachusetts Institute of Technology, USA, 8 May 2024. Presentation: *The role of aerosol science in understanding and minimizing the risk of airborne infection transmission*
- Invited Plenary Presentation, 'Przemysl Presentation', Poland, 22 May 2024. Presentation: *Na granicy wyobraźni, nauki i sztuki*
- Invited Plenary Presentation, 'WHO 27th Meeting of the Joint Convention/WHO Task Force on the Health Aspects of Long-range Transboundary Air Pollution', Bonn, Germany, 22-23 May 2024. Presentation: *Ultrafine particles monitoring to support WHO 2021 UFP Good Practice*
- Invited Plenary Presentation, 'Shanghai International Green Low-Carbon Proof of Concept Center', Shanghai, China, 30 May 2024. Presentation: *From Science to Policy: mandating indoor air quality for public buildings*
- Invited Plenary Presentation, 'ASHRAE 241: Indoor Air Quality and Energy Efficiency in the UAE Spotlight', HawaQ in cooperation with ASHRAE Falcon Chapter, 5 June 2024. Presentation: *Explore the significance of mandating performance standards for indoor air quality*
- Presentation, First meeting of the 'Group 36 Plus', Global Centre for Clean Air Research (GCARE), University of Surrey, 2-4 June 2024. Presentation: *The First Meeting of the Group 36 Plus*
- Invited Plenary Presentation, 'Indoor and Workplace Aerosol Conference, ETH Nanoparticles Conference NPC24 – Toxicology Session', Zurich, Switzerland, 10-14 June 2024. Presentation: *Exposure-response to ultrafine particles: how to advance knowledge about it*
- Invited Plenary Presentation, Kick Off Meeting of the 'Joint International Research Laboratory of Environment and Health, Ministry of Education', Sun Yat-sen University, Guangzhou, China, 14 June 2024. Presentation: *Short 3 minute pre-recorded speech introducing Prof Guanghui Dong*
- Invited Plenary Presentation, 'Safer indoor air: from science to policy', Centre for Safe Air (CSA) Webinar, 20 June 2024. Presentation: *From Science to Policy: mandating indoor air quality for public buildings*
- Invited Plenary Presentation, ISIAQ Workshop 'IEQ Guidelines Worldwide – Recommendations' Indoor Air 2024 Conference, Hawai'i Convention Centre, 7-11 July 2024. Presentation: *From Science to Policy: mandating indoor air quality for public buildings*
- Invited Plenary Presentation, Thrive Workshop 'Advanced Building Systems Against Airborne Infection Transmission', Indoor Air 2024 Conference, Hawai'i Convention Centre, 7-11 July 2024. Presentation: *IAQ must be regulated to protect human health in public spaces*
- Invited Keynote Presentation, 'IHEA QLD Branch Mid-Year Conference', QLD Branch of the Institute

of Healthcare Engineering (IHE) Australia and CETEC, Brisbane Convention & Exhibition Centre, 18 July 2024. Presentation: *It is time to mandate indoor air quality for public buildings!*

- Invited Presentation, 'Queensland Department of Education, Executive Directors Meeting', Brisbane, Australia, 29 July 2024. Presentation: *From Science to Policy: indoor air quality in schools*
- Invited Plenary Presentation, 'IAQ Meeting', Maine Department of Labor, Workplace Safety & Health Division, Augusta, Maine, USA, 6 August 2024. Presentation: *From Science to Policy: mandating indoor air quality for public buildings*
- Invited Plenary Presentation, 'CSA Health Workshop, 'Beyond the heart and lungs: exploring the spectrum of health impacts from air pollution', Clean Air Conference 2024, CASANZ & Centre for Safe Air, Hobart, Tasmania, 25 August 2024. Presentation: *Ultrafine particles (UFPs) and the brain*
- Invited Keynote Presentation, '27th International Clean Air and Environment Conference (Clean Air Conference 2024)', Clean Air Society for Australia and New Zealand (CASANZ), Hobart, Tasmania, 25-28 August 2024. Keynote Presentation: *Influencing change through scientific consensus*
- Invited Plenary Presentation, 'Matthew Flinders Medal and Lecture, Science at the Shine Dome 2024', Canberra, ACT, 9-12 September 2024. Presentation: *The science of air: helping us thrive*
- Invited Presentation, 'The Senate of the Republic of Poland "Health for Our Children - Round Table for Improving Air Quality in Educational Institutions"', Canberra, ACT, 13 September 2024. Presentation: *Od nauki do polityki: obowiązek zapewnienia dobrej jakości powietrza w budynkach użyteczności publicznej*. To watch on YouTube: <https://www.youtube.com/watch?v=DzeKxak9hHo>
- Invited Plenary Presentation, 'Australasian College for Infection Prevention and Control (ACIPC) Webinar Series', 19 September 2024. Presentation: *Indoor air quality: science, practice, legislation*
- Invited Plenary Presentation, 'Facilities Management Association of New Zealand (FMANZ)', Auckland, New Zealand, 25-26 September 2024. Presentation: *From science to policy: mandating indoor air quality for public buildings*
- Invited Plenary Presentation, 'ACTU Healthy Work Conference', Sydney, Australia, 9-10 October 2024. Presentation: *Future-proofing workplace health: mandating indoor air quality for public buildings*
- Invited Plenary Presentation, 'WeBaSOOP – Research Reinforcing in the Western Balkans in Offline and Online Monitoring and Source Identification of Atmospheric Particles', 21 October 2024. Presentation: *Is it time to monitor PNC routinely*
- Invited Plenary Presentation, 'Conference on air quality and health', WHO's Asia-Pacific Centre for Environment and Health in the Western Pacific Region (ACE), Korea's National Institute for Environmental Research (NIER) and UNEP, Jeju, Republic of Korea, 24-25 October 2024. Presentation: *From Science to Policy: supporting effort towards air quality in WPRO*
- Invited Plenary Presentation, 'IAQAA Conference "Using Science to Bridge the Gap in Indoor Air Quality and Disaster Response"', Rydges Parramatta, NSW 28-29 October 2024. Presentation: *From science to policy: mandating indoor air quality for public buildings*
- Invited Lecture, 'College of Environmental Sciences and Engineering, Peking University', Beijing, China, 29 October 2024. Presentation: *From Science to Policy: mandating indoor air quality for public buildings*
- Invited Lecture, 'Tsinghua University', Beijing, China, 30 October 2024. Presentation: *From Science to Policy: mandating indoor air quality for public buildings*
- Invited Plenary Presentation, 'ACC-AQSM Annual Meeting 2024', CRAES, Beijing, China, 31 October 2024. Presentation: *ACC-AQSM History*
- Invited Plenary Presentation, 'Panel Session 1: Sub-Forum 1 Sustainable Development and Environmental Health', Beijing Forum, College of Environmental Sciences and Engineering at Peking University, Beijing, China, 1 November 2024. Presentation: *Influencing change through scientific consensus: Our Air*
- Invited Plenary Presentation, '13th Asian Aerosol Conference 2024', BCKK in Kuching, Sarawak,

Malaysia, 3-7 November 2024. Presentation: *The world needs solutions to clean up the air we breathe: can aerosol science, technology and practice deliver them?*

- Invited Plenary Presentation, 'Centre for Robotics Retreat', Gibson Room, Queensland University of Technology, Brisbane, Australia, 15 November 2024. Presentation: *The science of air that helps us thrive*
- Invited Plenary Presentation, Launch of The Safer Air Project's Advocacy Report, Canberra, Australia, 20 November 2024. Presentation: *The science of air that helps us thrive*
- Policy & Values Conference, Warsaw, 21 November 2024. Presentation: *Policy & Values Conference; Social Resilience of Europe*
- Invited Plenary Presentation, 'Women in Research Webinar #31: 'Overcoming the challenges of intersectionality', 5 December 2024.

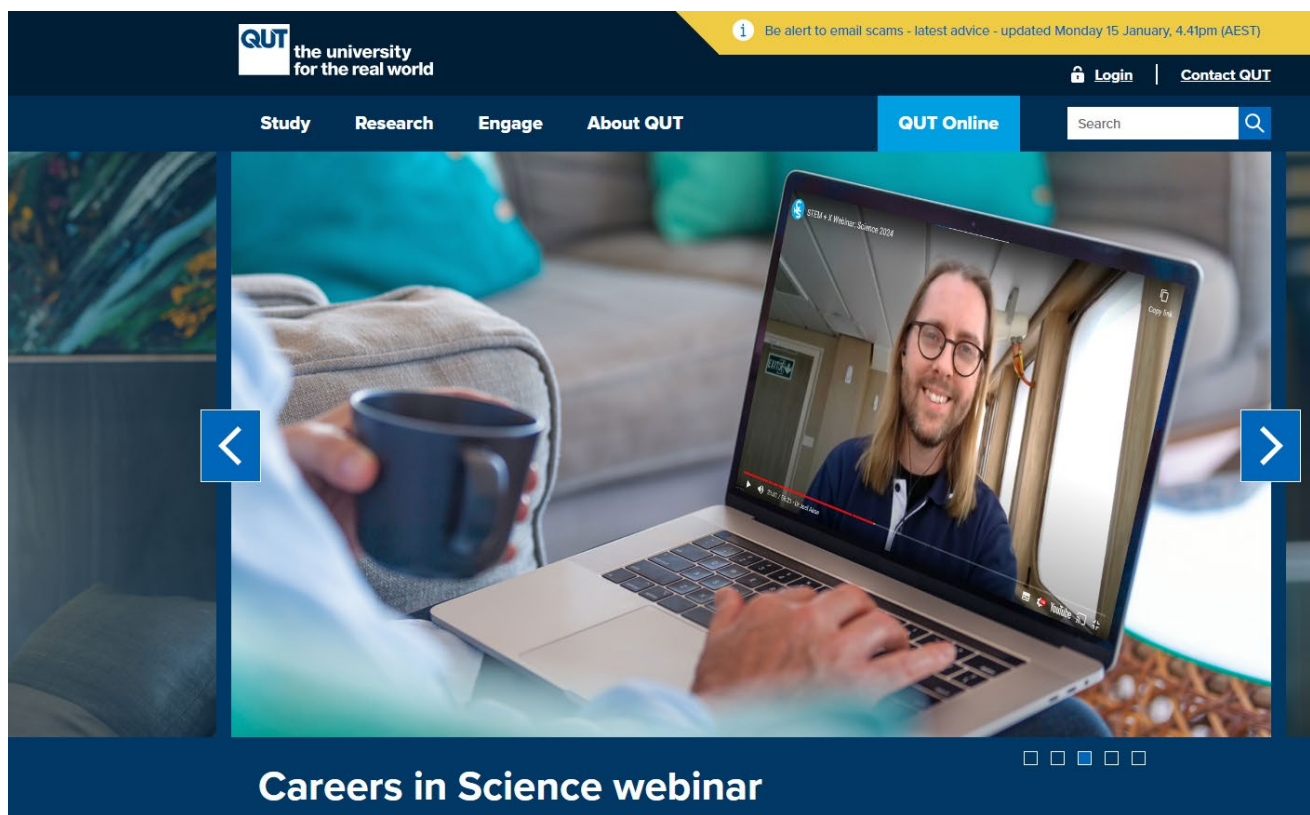
10. Activities – Other

Lidia Morawska

Submission to the [National Urban Policy for Australia](#) in 2024. The Australian Government are developing a National Urban Policy on the role that all levels of government, industry and the community can play in improving Australian cities and suburbs. Submission on behalf of Thrive.

Joel Alroe

A STEM + X webinar series was held on the 28th February 2024, produced for secondary schools and primary school teachers, providing insight into a range of careers that blend traditional STEM fields with unusual or impactful settings/goals. Dr. Joel Alroe participated in a segment on one of the panels, and the interview questions centred on both Joel's research activities on the RV Investigator and the Fogging component of the RRAP Cooling and Shading subprogram. [To watch the STEM + X webinar.](#)



11. Media Appearances

Lidia Morawska

Many media appearances / interviews, for example:

- Scipod with Eddie Cunningham on 18 November.
- ABC News with Tegan Osbourne and Cale Matthews on 6 November, "[Calls for indoor air quality mandate and \\$10 billion for school ventilation](#)"
- Nature News with Smriti Mallapaty on 28 October, "[Funding in Australian Universities](#)"
- RNZ on 9 October, "[Air slowly getting cleaner, but health impacts of breathing pollution worse than previously thought](#)"
- Zycie Polish Newspaper on 2 October, "[Każdy z nas ma jedno życie do przeżycia. Profesor Lidia Morawska z kolejną, ważną nagrodą](#) | "[Each of us has one life to live. Professor Lidia Morawska with another important award](#)"
- Architecture & Design on 30 September, "[Visible solutions for invisible threats: How architects and designers can champion VOC-free interiors](#)"
- ABC News on 27 September, "[COVID's long shadow looms as Anthony Albanese urged to lead on indoor air quality as part of pandemic planning](#)"
- The Conversation on 26 September, "[Grattan on Friday: Experts want Albanese to lead on indoor air quality as part of pandemic planning](#)"
- Center for the Built Environment at UC Berkeley with Toby Kramer on 3 October, on IAQ Sensors.
- Radio New Zealand programme [Nine to Noon](#) on 25 September, "[Breath of fresh air: Lidia Morawska on the case for mandatory air quality standards](#)"
- Hamilton Northshore Village Voice with Evangeline Drinnan on 19 September, "Aircraft Air Pollution"
- Victoria Lewis, student journalist at QUT on 16 September, "Mandating indoor air quality for public buildings"
- Spanish National Radio on 13 September, "[Mandating indoor air quality for public buildings](#)"
- Le Figaro with Anne-Laure Frémont on 9 September, "[Les bactéries pathogènes peuvent voyager dans les airs sur des milliers de kilomètres](#)" (Pathogenic bacteria can travel through the air for thousands of kilometers)
- HVAC&R News with Mark Vender on 5 September, "[Researchers raring to build IAQ knowledge](#)"
- Climate Control News on 27 August, "[IAQ set to thrive](#)"
- ABC Radio Sydney & NSW Afternoons Program with James Valentine on 22 August, "Do you really need an exhaust fan while cooking?"
- HVAC&R News on 14 August, "[QUT launches Thrive lab](#)"
- Headtopics UK on 8 August, "[C-Path supports innovative ALS, neurodegenerative disease research with new grant](#)"
- ABC with Nelli Saarinen on 7 August, "[Do you need to turn on kitchen exhaust fans when cooking?](#)"
- @TheReSisters2 with Christine Copper on 31 July.

- **ABC** with Haley Gleeson on 31 July, “[Victoria's new 'clean air' project could help end the COVID pandemic and boost productivity](#)”
- **Fraunhofer WKI Release** on 26 July, “[Have we learned from the COVID-19 pandemic how to properly ventilate indoor spaces?](#)”
- **QUT Media Release** on 26 July, “[Seven steps to achieving our right to clean indoor air post-pandemic](#)”
- **QUT Media Release** on 19 July, “[‘A catalyst for revolution’: Launch of Thrive looks to safeguard public health](#)”
- **Media Release, Senator the Hon Anthony Chisholm**, Assistant Minister for Education and Assistant Minister for Regional Development on 19 July, “[New QLD research centre set to fight pathogens and improve air quality](#)”
- **3BL** on 11 July, “[Advocacy Momentum Surges for Healthy Building Policy](#)”
- **Mirage News** on 14 June, “[Clinical Trial to Evaluate UV Light Against Airborne Viruses](#)”
- **Australia Research Council** on 12 June, “[Setting a new standard for Indoor Air Quality](#)”
- **Cosmos** with Matthew Agius on 6 June.
- **Statnews.com** with Megan Molteni on 4 June, “[A new discovery about carbon dioxide is challenging decades-old ventilation doctrine](#)”
- **Nine.com.au** with Rosalyn Fannin on 28 May, “[Air purifiers to help improve the air quality in your home](#)”
- **BBC** with Christian Fuller on 21 May, “[University fellow elected to prestigious academy](#)”
- **QUT Media Release** on 15 May, “[Smoke from controlled burn offs and surface dust are leading source of particle air pollution](#)”
- **Medium** with Robert Roy Britt on 6 May, “[How Toxic is the Air in Your Home?](#)”
- **Santé Le Figaro** with Anne-Laure Frémont on 1 May, “[Covid-19 : un air chargé en CO₂ prolonge la durée de vie du Sars-Cov-2](#)”
- **Australian Academy of Science** video on 27 April, “[Why we need a mandate for indoor air quality](#)”
- **QUT Media Release** on 26 April, “[Global air quality expert elected to American Academy of Arts and Sciences](#)”
- **German Public Radio** with Volkart Wildermuth on 26 April, “[Indoor Air Quality](#)”.
- **Nature News** with Bianca Nogrady on 24 April, “[WHO redefines airborne transmission: what does that mean for future pandemics?](#)”
- **Harvard Public Health Leah Samuel** on 22 April, “[Governments can make indoor air healthier](#)”
- **The Courier Mail** on 16 April, “[New planes, many tweaks the key to fixing Brisbane's plane noise: Inquiry](#)”
- **Bloomberg** with Jason Gale on 15 April, “[Scientists Rename Airborne Viruses After Covid Mistakes](#)”
- **InQueensland** on 12 April, “[QUT Professor's national blueprint for indoor air quality](#)”
- **India Education Diary** on 5 April, “[University Of Colorado Boulder Scientists Urge For Policies Regulating Indoor Air Quality](#)”
- **University of Surrey** on 4 April, “[Indoor air quality standards needed, say international experts](#)”

- **Air Quality News** on 3 April, "[Calls for indoor air quality standards to be introduced worldwide](#)"
- **Publico** with Andréia Azevedo Soares on 29 March, "[Good air quality should be mandatory in public buildings, scientists say](#)"
- **CIRES, Colorado** on 2 April, "[Scientists advocate for policies regulating indoor air](#)"
- **The Courier Mail** on 2 April, "[Scientists demand action on indoor air quality](#)"
- **The Guardian** on 31 March, "[Measles alert for Sydney as experts call for improvement in indoor air quality](#)"
- **QUT Media Release** on 29 March, "[Mandating indoor air quality for public buildings](#)"
- **News Medical Life Science** on 29 March, "[Experts call for mandatory indoor air quality standards to boost health and economy](#)"
- **Mirage News** on 29 March, "[Blueprint Unveiled for Indoor Air Quality Standards in Public Buildings](#)"
- **Polish Journalist** Magdalena Majewska on 29 March.
- **The World** with Carolyn Baker on 28 March, "[Scientists demand enforcement of indoor air quality](#)"
- **Forbes** with Laurie Winkless on 26 March, "[Public Buildings Should Mandate Cleaner Air](#)"
- **ABC** with Tegan Taylor on 26 March, **Science IAQ Paper**.
- **AIRAH** with Mark Vender on 26 March, **Science IAQ Paper**.
- **Sky News** with Simon Love on 26 March, **Science IAQ Paper**.
- **Academy of Science** on 22 March.
- **Croaky Health Media** on 14 March, "[With indoor air quality in the spotlight, experts urge governments to do more to prepare communities for bushfire smoke hazards](#)"
- **Polish journalist Dominika Giordano** on 11 March.
- **ABC** with Elise Kinsella on 22 January.

12. Visitors

- Ms Shijie Han, Visiting Research Student, Jinan University, China, 1 January 2023– June 2024
- A/Prof Xuying Ma, Visiting Research Fellow, Xi'an University of Science and Technology, China, 2 February 2023 – 31 January 2024
- Mr Pengju Liu, Visiting Research Student, China University of Mining & Technology (Beijing), 6 February 2023 – 8 February 2024
- Dr Sylwia Dytłow, Visiting Research Fellow, Institute of Geophysics, Polish Academy of Sciences, 21 September 2023 – 16 January 2024
- Dr Ramon Braga, Visiting Research Fellow, Southern Cross University, Australia, 13 November – 12 April 2024
- Mr Yang Xiao, Visiting Research Student, Jinan University, Guangzhou, China, 1 December 2023 – 31 December 2024
- Mr Alex Mikszewski, External QUT PhD Student, 29 January – 3 February 2024
- Adjunct Prof Giorgio Buonanno, University of Casino and Southern Lazio, Italy, 30 January – 6 February 2024
- Adjunct Prof Tunga Salthammer, Fraunhofer WKI, Germany, 15 November 2024 – 15 February 2025
- Mrs Alina Sarosiek (retired), 1 February 2024
- Ms Jicui Cui, CSC Visiting Research Student, Shanghai Jiao Tong University (SJTU), 20 February 2024 – 20 February 2025
- Prof Xavier Querol, Visiting Research Academic, CSIC, IDAEA, Spanish Research Council, Barcelona, Spain, 25-28 February 2024
- Ms Jinli Xu, CSC Visiting Research Student, University of Chinese Academy of Sciences, China, 1 March 2024 – 31 September 2024
- A/Prof Xuying Ma, Visiting Research Fellow, Xi'an University of Science and Technology, China, 20 – 30 April 2024
- Ms Ngo Ching Rochelle Leung, Chinese University of Hong Kong, 17 June 2024 – 23 August 2024
- Prof Charitha de Silva, Dr Prateek Bahl, and Dr Mohamed Mahmoud, The University of New South Wales, 3 July 2024
- Dr Allen Haddrell, School of Chemistry, The University of Bristol, United Kingdom, 4 July 2024
- Prof Hao Wang, Jinan University, Guangzhou 13-28 July 2024
- Prof Sasho Gligorovski Guangzhou Institute of Geochemistry (GIG), Chinese Academy of Science (CAS), China, 13-22 July 2024
- Ms Georgia Powell, Visiting Research Student, University of Liverpool, UK, 29 July – 9 August 2024
- Professor Ralf Zimmermann, Chair of Analytical Chemistry at the University of Rostock, and Head of the Comprehensive Molecular Analytics unit of the Helmholtz Centre Munich in Germany, 15 August 2024

- Dr Hamesh Patel, Mote, NZ, 22-23 August 2024
- Ms Alícia Josa Culleré, Visiting Research Student, Barcelona Institute for Global Health (ISGlobal), 23 September 2024 – 23 March 2025
- Professor Donald Milton, University of Maryland School of Public Health, 3 October 2024
- Associate Professor Robyn Schofield, University of Melbourne, 17 October 2024.
- Dr Duan Yusen, Deputy Director, Shanghai Technology Center for Reduction of Pollution and Carbon Emissions, 21-23 October 2024
- Dr Feng Xu, Deputy Director, Shanghai Solid Waste and Chemicals Management Center, 21-23 October 2024
- Dr Jian Zhou, Deputy Director, Shanghai Municipal Bureau of Ecology and Environment Law Enforcement Corps, 21-23 October 2024
- Dr Weicheng Cao, Section Chief, Shanghai Technology Center for Reduction of Pollution and Carbon Emissions, 21-23 October 2024
- Adjunct Professor Tunga Salthammer, Fraunhofer WKI, Germany, 15 November 2024 – 15 February 2025
- Adjunct Professor Heidi Salonen, Aalto University, Finland, 25 November 2024 – 16 December 2024
- Professor Katja Kanninen, Virtanen Institute for Molecular Sciences at University of Eastern Finland, 29 November 2024
- Delegation from Sun Yat Sen University in Guangzhou, China, 6 December 2024:
 - Prof. Guofeng Huang, Dean of Guangdong Environmental Monitoring Centre
 - Prof. Duohong Chen, Chair of Department of Air Quality Forecasting and Early Warning, Guangdong Environmental Monitoring Centre
 - Prof. Guanghui Dong, Associate Dean of School of Public Health, Sun Yat-sen University
 - Prof. Xiaowen Zeng, Chair of Department of Occupational and Environmental Health, Sun Yat-sen University
 - Dr. Yan Zhou, Guangdong Environmental Monitoring Centre
 - Dr. Wenzhong Huang, School of Public Health and Preventive Medicine, Monash University