EPSRC CDT in Aerosol Science Annual Conference 2022

M Shed, Bristol, UK
Wednesday 6th July
Please view our event [Code of Conduct here](#) to ensure all participants have an enjoyable and fulfilling experience during our Annual Conference event.

WELCOME

OUR SPONSORS

LOCATION

ANNUAL CONFERENCE

Timetable

Cohort 1 Oral Presentations

Cohort 2 Poster presentations

Cohort 3 Poster presentations

Covid Mitigations

Contact Us
Welcome back to our second Aerosol Science CDT Annual Conference, this year held in-person.

The Aerosol Science CDT is now in the process of recruiting its 4th cohort of students to start their training in Bristol in September 2022. Currently, 51 of our students are in different stages of their PhD studies tackling a range of projects in different areas and disciplines such as aerosol technology, aerosols and health, and environmental aerosol.

We look forward to our students sharing more about their achievements during our Conference.

The year 2023 will see the recruitment of our 5th cohort of students. We are very excited to celebrate with you our accomplishments so far, and for you to see what it means to be part of this incredible interdisciplinary National Centre.

Our hope is that each annual conference will provide an exciting opportunity to hear about the latest research underway across the CDT.

Best regards
The CDT Core Team
LOCATION

M Shed
Princes Wharf, Wapping Rd, Bristol BS1 4RN
# AGENDA

## WEDNESDAY JULY 6TH

<table>
<thead>
<tr>
<th>TIME</th>
<th>EVENT</th>
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<tbody>
<tr>
<td><strong>COHORTS 2 &amp; 3 POSTER SESSIONS</strong></td>
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<tr>
<td>09:00</td>
<td>Arrivals</td>
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<tr>
<td>09:30</td>
<td>Welcome</td>
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<td>09:35</td>
<td>Cohort 3 poster session</td>
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<td>10:30</td>
<td>Break</td>
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<td>10:45</td>
<td>Cohort 2 poster session</td>
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<td>11:45</td>
<td>Networking and Placement Discussions</td>
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<td>12:15</td>
<td>Lunch</td>
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<td><strong>PRESENTATIONS FROM COHORT 1</strong></td>
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<tr>
<td>13:15</td>
<td>Introduction to talks</td>
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<td>Student Talk 1 (12 min talk + 3 min questions)</td>
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<td>Student Talk 7</td>
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<td>15:00</td>
<td>Break and networking</td>
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<td>15:30</td>
<td>Student Talk 8</td>
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<td>Student Talk 9</td>
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<td>Student Talk 13</td>
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<td>17:00</td>
<td>Closing Remarks &amp; end of event</td>
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<td>17:30</td>
<td>M Shed Exhibition</td>
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<td>19:00</td>
<td>Drinks Reception</td>
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<td>20:00</td>
<td>Conference Dinner</td>
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COHORT 1 ORAL PRESENTATIONS

1) **Ted Robson**: Aerosol-assisted chemical vapour deposition of semiconducting metal chalcogenides

2) **Michael Glerum**: The energy to aerosolise a carbon nanotube from CNT mats, fibres and composites

3) **Lauren McCarthy**: The dynamics of picolitre sessile droplets

4) **Toria Legh-Land**: Exploring the Interaction of Water Vapour with Medicinal Aerosols Following Inhalation: a Particle Engineering Approach

5) **Khaled Alzahabi**: Inhalable Nanomedicines for Treatment of Tuberculosis

6) **George Adams**: Determining the effects of airborne particles on epithelial cell function

7) **Pete Knapp**: Charge states of various salt aerosols

8) **Maddie Reader**: Damage to jet engines by airborne particulates; detection and mitigation

9) **Katie Thompson**: The Size Distribution of INP in the Labrador Sea

10) **Tom Hilditch**: The dependence of activity coefficients of organic aerosol components on the character of the matrix

11) **Jamie Knight**: Direct spectroscopic quantification of the absorption and scattering properties for single aerosol particles

12) **Max Moss**: Applying multiple cluster strategies for bioaerosol detection

13) **Josh Harrison**: Development of a single droplet mass spectrometry approach using droplet assisted ionization
COHORT 2 POSTER PRESENTATIONS

1) **Olivia Jackson**: Understanding Atmospheric Properties of Pesticides Using Mass Spectrometry
2) **Rob Lewis**: Respirable Fibre Detection from Light Scattering Patterns
3) **Lance Jiang**: Aerosol Dynamics of Particles at High Relative Humidity
4) **Frederick Bertani**: Improving the Evaporative Light Scattering Detector using Experiments and Modelling
5) **Stanislaw Koper**: Early Warning Detection Systems for Viral Bioterrorism
6) **Jiangan Tian**: Inhalation Dynamics of Aerosol and Airborne Disease Transmission
7) **Edward Neal**: Designing a Wind Tunnel to Investigate Particle Resuspension
8) **Joanna Egan**: Optical Properties of Venusian Clouds
9) **Caterina Fantuzzi**: Microphysiological models for the assessment of pulmonary concentration of inhaled aerosols
10) **Altin Kocinaj**: In-vitro modelling of the lung’s response to environmental nanoparticulates
11) **Fergus Lidstone-Lane**: Developments in Particle Transport and Losses when Sampling Aircraft Engine Combustion Emissions
12) **Joshua Hassim**: Investigating the Effect of Relative Humidity on Bipolar Charging
13) **Jack Macklin**: The development of an electrodynamic balance
COHORT 2 POSTER PRESENTATIONS

14) **Ellie Vokes**: Aerosol Jet Printed p- and n- type Semiconductor Materials: Practical Routes to Printed Electronics

15) **Cyprien Jourdain**: In-flight measurement of nanoparticle surface area and volume

16) **Robert Alexander**: Determining the role of mucin in the loss of infectivity of aerosolised coronavirus

17) **Georgia Gamble**: Peat Fires and their Health Impacts

18) **George Downing**: Smart Filtration of Aerosols in Ventilation Systems
1) **Mahmoud Ahmed**: Environmentally Friendly Plasma Coated pMDI Inhalers
2) **Jamie McLauchlan**: Mechanics of Soft Aerosols
3) **Prem Perumal**: Health Effects of Indoor Aerosols
4) **Hao Zhang**: Deep learning based forecasting and classification of aerosol
5) **Eddie Benfield**: Exploring and designing the structure of particles of dried colloidal dispersions
6) **Priya Chopra**: Airborne particle collection into single droplets to analyse and identify harmful aerosol constituents
7) **Abigail McConnell**: Photochemical Processing of Atmospheric Aerosols
8) **Gwen Lawson**: A New Approach to Aerosol Thermodynamic and Optical Properties Using Phase Shift Photoacoustic Spectroscopy
9) **Polly Foster**: Microfluidic Technology For Atmospheric Biological Ice Nucleating Particle Analysis
10) **Barney Miles**: The effect of environmental factors on the drying of aerosol droplets containing dispersed particles
11) **Joe Morris**: Polyaromatic hydrocarbons and cardiovascular health
12) **Kelvin Risby**: Development of a constant concentration particle source
13) **Joel Ponsonby**: Understanding the role of aviation soot in contrail formation and warming
14) **Aaron Barber**: Transport and dispersion of non-exhaust pollutants

15) **Alexander Mitchener**: Nanoscale Analysis of London Pollutant Particles and their Interaction with Airway Epithelial Cells

16) **Skhathi Mthembu**: Classification of microparticles using two-dimensional scattering data and machine learning techniques

17) **Isabel Quant**: Interfacial Photochemistry in Aerosol Droplets: The Impact of Surfactants

18) **Samuel Hyman**: How Particulate Matter Affects Lung Infection and Immune Response

19) **Benjamin Mignot**: Modelling of airborne transmissions of respiratory droplets containing SARS-COV-2 virus
COVID MITIGATIONS

We are mindful of the continuing risks of transmission of Covid-19 and want to try and ensure we all have a safe and enjoyable conference. Although the venue has a capacity of 230, we have decided to limit attendance to 130 to avoid crowding. We do not require the wearing of a face covering but recognise that many of our attendees may choose to.

We will be:

- Monitoring ventilation and CO2 levels in the venue using CO2 detectors
- Using air purifiers to supplement good ventilation in the venue
- Where appropriate opening doors and windows to ensure ventilation throughout the day
EPSRC Centre for Doctoral Training
in Aerosol Science

Key contacts:
- Prof Jonathan Reid - CDT Director
- Dr Rachael Miles - CDT Course Manager
- Kate Lucas - CDT Administration Manager
- Yaelle Hartley - CDT Partnerships Manager
- Sam Archard - CDT Administrator

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https://www.aerosol-cdt.ac.uk/