



### 5th ANNUAL AEROSOL SCIENCE CDT SANDPIT EVENT

Thursday 7th July 2022



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Please view our event <u>Code of Conduct here</u> to ensure all participants have an enjoyable and fulfilling experience during our Sandpit event.

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## WELCOME TO THE AEROSOL SCIENCE CDT SANDPIT 2022

We are gladly back to be holding our 5th Annual Aerosol Science CDT Sandpit 2022 in-person.

This will be a great opportunity to hear about the challenges you are currently facing in aerosol science and give our Partners the chance to connect with our team of Academics from our 7 Partner Institutions and discuss interdisciplinary and multi-institutional research to generate ideas for future projects as we recruit our 5th cohort of students in 2023.

Best regards
The CDT Core Team



### WELCOME



Prof Adam Boies, CDT Partnerships Director

Adam Boies is Head of the Energy Group within the Cambridge University Engineering Department and leads a group in Nanomaterials and Aerosol Engineering. His research focuses on characterizing the evolution, dynamics and impacts of gas-phase nanoparticles with an emphasis on energy applications, aerosol instrumentation and emissions. As Partnerships Chair of the Aerosol Science Doctoral Training Centre his focus has been to ensure that the CDT brings value to our industrial and govern-

ment partners through continued education, research and training of the next generation of

aerosol scientists. We aim to ensure that the Aerosol Science CDT serves as a nucleus for industrial, academic and industrial research sparking new collaborations and partnerships.

Find out about our <u>Partners—exploring the (Inter!)National Skills Gap in</u> <u>Aerosol Science</u>.

If you are interested in representing any of the thematic areas (Health, Technology, Atmospheric Aerosols, Measurement Techniques and Basic Aerosol Processes) at our <u>Partnerships Board</u> for year 2022-23 please contact our CDT Partnerships Manager to put your candidacy forward.

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# LOCATION CLIFTON HILL HOUSE

Lower Clifton Hill, Clifton, Bristol BS8 1BX





Engineering and Physical Sciences Research Council

TIMEX	SCHEI	DULE
TIME	EVENT	LENGTH
09:30	Welcome and Introduction	5 min
09:35	Guest Speaker Interview	20 min
09:55	Overview of breakout sessions	5 min
10:00	Session 1	70 min
11:10	Break	15 min
11:25	Session 2	70 min
12:35	Closing remarks	10 min
12:45	End of Sandpit - Lunch	



### GUEST SPEAKER Prof Cath Noakes



Prof Cath Noakes Professor of Environmental Engineering for Buildings, University of Leeds

We are delighted to welcome Prof Cath Noakes as our Guest Speaker for this year's Sandpit. Cath Noakes is a chartered mechanical engineer, with a background in fluid dynamics. Her teaching and research expertise is in building physics and environmental engineering and she leads research into ventilation, indoor air quality and infection control in the built environment. Her internationally recognised group carry out experimental and modelling based

studies, in particular to explore the transport of airborne pathogens, the influence of indoor airflows and effectiveness of engineering approaches to controlling airborne disease transmission. This include substantial research activity and policy advice relating to COVID-19 transmission.

During the COVID-19 pandemic she co-chaired the Environment and Modelling sub group for the UK Scientific Advisory Group for Emergencies (SAGE) and have contributed to multiple advisory groups and initiatives through IMechE, CIBSE, the Royal Academy of Engineering, the Academy of Medical Sciences, WHO, the NHS and several government departments. She was Faculty of Engineering Athena Swan Lead 2014-2017 and led a successful Silver Athena Swan submission covering all five schools in the Faculty. She was chair of the University Women at Leeds network 2013-2017. In December 2021, she was one of the guest lecturers in the Royal Institution Christmas Lectures and has received a number of awards and professional recognition.



### **BREAKOUT SESSIONS**

At the beginning of each session, we will be hearing 2min pitches from Academics and Partners about the challenges they are facing in the current aerosol science landscape. This will then be fruit for discussions to find solutions and possible research projects for our 5th cohort of students who will start their training in October 2023. The breakdown of the challenges may change depending on submissions.

#### SESSION 1 CHALLENGES

- 1. Aerosols in our atmosphere
- 2. Therapeutics, vaccine and drug delivery systems
- 3. Transmission of disease
- 4. Toxicology and impacts on health
- 5. Advances in measurements and data processing

#### **SESSION 2 CHALLENGES**

- 1. Aerosols in our atmosphere
- 2. Therapeutics, vaccine and drug delivery systems
- 3. Aerosol modelling (incl. computational fluid dynamics)
- 4. Agriculture and aerosols
- 5. Aerosol technology to support the energy transition (including radioactive aerosols)

### Project submission deadline: Monday 26th September 2022, 9 am.



(70 min) 10:00-11:10

#### (70 min) 11:25-12:35

### **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 30 to 50 per room, we will limit attendance to 15 to 30 per room 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



### SPECIAL THANKS

The Aerosol Science CDT team would like to thank our guest speaker for accepting the interview, our partners and partnerships board for their insights and continuous support over the course of the year, and finally, all of our Sandpit 2022 event attendees for participating. Thank you for taking the time and effort to travel to Bristol and attend our in-person events this year. We hope the Sandpit discussions will lead to interesting and exciting projects for our 5th cohort of PhD students starting in 2023!

#### EPSRC Centre for Doctoral Training in Aerosol Science

#### Key contacts:

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- Prof Jonathan Reid CDT Director
- Or Rachael Miles CDT Course Manager
- ◊ Kate Lucas CDT Administration Manager
- Vaelle Hartley CDT Partnerships Manager
- Sam Archard CDT Administrator

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