



AIRCRAFT CABIN AIR
International Conference

INTERNATIONAL AEROSPACE CONFERENCE

AIRCRAFT CABIN AIR CONFERENCE

Flight Safety and Cabin Air Quality

3 Day Conference, Online

27-29 JUNE 2023

aircraftcabinair.com



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Tristan Loraine (Conference Director)
Susan Michaelis, Dieter Scholz (Editor)

CONFERENCE PROGRAMME

2023 International Aircraft Cabin Air Conference

27-29 June 2023, Online, Zoom

London: Global Cabin Air Quality Executive (GCAQE)

2023

Conference Homepage:

<https://www.aircraftcabinair.com>

Conference Proceedings Homepage:

<https://zenodo.org/communities/aircraftcabinair>

DOI of this Document:

<https://doi.org/10.5281/zenodo.8126470>

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1 Introduction

The 2023 International Aircraft Cabin Air Conference is an essential modular online event via Zoom over three days. The conference is providing an in-depth overview, update and debate for those seeking to understand the subject of contaminated air, the flight safety implications, the latest scientific and medical evidence investigating the contaminated air debate and the solutions available to airlines and aircraft operators.

This online international conference mapping the business, regulatory and technical solutions to cabin air contamination, follows on from the successful 2017 and 2019 conferences we organised in London and the free online conference in 2021.



2 Conference Objectives

By way of films and presentations from expert global independent and industry speakers, the 2023 International Aircraft Cabin Air Conference will provide a vital update into the subject matter. Through a modular format, over 3 days, the conference participants will have access to a wide selection of presentations and talks. These will range from the historical beginnings of contaminated air, previous research, the flight safety implications and findings, medical aspects of exposures, current research and policy making, review of the position of various organisations, guidance related to the issue, the GCARS reporting system and the very latest news in the development of sensors and filtration technologies to detect and filter contaminated air.

The conference will seek to achieve the following key objectives:

- Provide a historical overview of the contaminated air issue and its causes from the 1950s to the present day.
- Map out the flight safety aspects of contaminated air through case studies, discussion and air accident investigation findings.
- Disseminate the latest medical and scientific theories and findings on the health aspects of exposure to contaminated air.
- Provide guidance related to workers compensation as well as to legal and regulatory aspects of cabin air quality.
- Provide regulators, airlines, occupational and public health officials, policy makers, engine manufacturers, researchers, academia, airline workers, passengers, media and other interested parties, the opportunity to expand their knowledge and understanding of the contaminated air issue.
- Examine the latest development towards bleed air filtration, contaminated air warning sensor systems and other potential solutions.

3 Schedule for the 2023 Aircraft Cabin Air Conference

27 - 29 June 2023, 1500 to 2000 GMT+1

All times are London time – GMT+1

2023 AIRCRAFT CABIN AIR CONFERENCE

CONFERENCE STARTS AT
0700 PST
1000 EST
1500 LONDON
1600 PARIS

27-29 JUNE 2023
aircraftcabinair.com

DAY ONE: Tuesday 27 June 2023

SESSION ONE: Introductions and the history of the issue

15:00 - 15:07

Conference introduction

Captain Tristan Loraine BCAi

Conference Director

15:08 - 15:15

Contaminated air – A passenger's perspective

Passengers

Film - 1

15:16 - 15:18

May 18th, 1994 – Before the US subcommittee on aviation

Deanne Dewitt Freise

(Filmed interview)

Film - 2

Films 1 & 2 available to view at <https://vimeo.com/840128186>

15:19 - 15:43

History of AFA's work to address toxic fumes on aircraft

Sara Nelson

International President

Association of Flight Attendants - CWA, AFL-CIO

15:44 - 15:49

1977: Confirmation of human intoxication following crew exposure to engine oil and decomposition products

Dr. Mark Montgomery

Toxicologist

(Filmed interview)

Film - 3

15:50 - 15:54

Contaminated air - The perspective of an air accident investigator

Olivier de Sybourg

Investigator

Swiss Transportation Safety Investigation Board (STSB)

(Filmed interview)

Film - 4

Films 3 & 4 available to view at <https://vimeo.com/840141625>

15:55 - 16:00
Discussion and Q&A

16:01 - 16:06
Comfort Break

SESSION TWO: The cabin environment

16:07 - 16:08
Session introduction

Captain Philippe Ammann
Conference Assistant Director

16:09 - 16:15
The Aircraft Cabin – A Unique Environment
Daniel Tandoi
Vereinigung Cockpit e.V.

16:16 - 16:32
Experimental Study of Aerosol Dispersion in a Long-Range Aircraft
Cabin Mock-Up
Tobias Dehne
German Aerospace Center (DLR),
Institute of Aerodynamics and Flow Technology

16:33 - 16:58
Aircraft Humidity Control Systems
Ola Häggfeldt
Chief Commercial Officer (CCO)
CTT Systems AB, Sweden

16:59 - 17:14
Discussion and Q&A

17:15 - 17:19
Comfort Break

SESSION THREE: Operational & political aspects

17:20 - 17:39

Cabin Air Contamination Events - Engineering Aspects

Prof. Dr.-Ing. Dieter Scholz, MSME

Hamburg University of Applied Sciences

Department of Automotive and Aeronautical Engineering

Aircraft Design and Systems Group (AERO)

17:40 - 18:00

Politics of Contaminated Air

Baroness Bennett of Manor Castle

Green peer, UK House of Lords

18:01 - 18:21

Fume Event Reporting among German Airline Crews –
Knowledge and Demands

Ekaterini Bary-Schüller

P-CoC e.V.

18:22 - 18:47

Cabin Air Quality - A European perspective

Dr. Susan Michaelis BCA(hon)

University of Stirling & Michaelis Aviation Consulting

18:48 - 19:04

The long road to Regulation

Frank Brehany

Independent Travel Consumer Activist

19:05 - 19:46

American 965 – A closer look

Extracts from the documentary "American 965"

Captain Tristan Loraine BCAi

Conference Director

Film – 5 (<https://www.american965.com>)

Film 5 available to view at <https://vimeo.com/840022957>

19:47 - 19:59
Discussion and Q&A

19:59 - 20:00
Day 1 Closing comments
Captain Tristan Loraine BCAi
Conference Director

DAY TWO – Wednesday 28 June 2023

SESSION FOUR: Global and legal perspectives

15:00 – 15:02
Session introduction
Captain Tristan Loraine BCAi
Conference Director

15:03 - 15:09
Under reporting and GCARS
GCARS
A short film introduced by Captain Tristan Loraine BCAi
Film – 6

Films 6 available to view at <https://vimeo.com/368028953>

15:10 - 15:46
Toxic Cabin Air Litigation in the United States
Zoe Littlepage
Littlepage Booth & Athea Trial Lawyers

15:47 - 16:00
Discussion and Q&A

16:01 - 16:06
Comfort Break

SESSION FIVE: Synthetic engine oils and hydraulic fluids

16:07 - 16:38

Lubricating oils for aviation gas turbine engines

Jean Szydywar

Synthetic lubricating oil subject matter expert

16:39 - 16:59

The need for less hazardous turbine oils

Guest Panel

17:00 - 17:13

Discussion and Q&A

17:14 - 17:19

Comfort Break

SESSION SIX: Air monitoring and measuring

17:20 - 17:22

Session introduction

Captain Philippe Ammann

Conference Assistant Director

17:23 - 17:49

Recent research in assessment of occupational exposure to organophosphate flame retardant used in jet oils

Vincent Peynet

Institut de Recherche et d'Expertise Scientifique, Strasbourg

17:50 - 18:20

Recent Research in Bleed Air Contamination Detection

Richard Fox, Ph.D.

Aircraft Environment Solutions

Byron Jones, P.E., Ph.D.

Kansas State University

18:21 - 18:51
Air Measuring Technologies
Juha Kaartinen
Managing Director
Pegasor Oy

18:52 - 19:10
Discussion and Q&A

19:11-19:16
Comfort Break

SESSION SEVEN: The Cabin Air Safety Act

19:17 - 19:18
Session introduction
Captain Tristan Loraine BCAi
Conference Director

19:19 - 19:39
The Cabin Air Safety Act
US Senator Richard Blumenthal

19:40 - 19:45
Discussion and Q&A

19:45 - 19:57
Jim McAuslan of BALPA – Closing speech at the
BALPA Air Safety and Cabin Air Quality International Aero Industry
Conference. Imperial College, London, 20.-21.04.2005
<https://doi.org/10.5281/zenodo.8126389> (p. 291, PDF p. 313)

Film available to view at <https://vimeo.com/843151753>

19:58 - 20:00
Day 2 Conference closing comment
Captain Tristan Loraine BCAi
Conference Director

DAY THREE - Thursday 29 June 2023

SESSION EIGHT: Safety analysis and biomarkers of exposure

15:00 - 15:03

Session introduction

Captain Philippe Ammann

Conference Assistant Director

15:04 - 15:09

NTSB – Failure To Investigate Contaminated Air Events:

The Story of US Airways Boeing 767 #251

Film – 7

Film 7 available to view at <https://vimeo.com/843151753>

15:10 - 15:35

A 26 year perspective – A conversation with

Dr. Susan Michaelis BCA(hon)

University of Stirling & Michaelis Aviation Consulting

15:36 - 15:39

Captain Tristan Loraine BCAi

Conference Director

15:40 - 16:05

Have You Been Exposed to Aircraft Engine Oil? –

Biomarkers of Exposure

Professor Clement Furlong

Professor of Medicine and Genome Sciences

University of Washington

16:06 - 16:27

Discussion and Q&A

16:28 - 16:32

Comfort Break

SESSION NINE: Medical aspects of contaminated air

16:33 - 16:40

Treating people with Aerotoxic Syndrome

Dr. Mariano Bueno Cortés

Director Médico Biosalud Day Hospital

Film – 8

Film 8 available to view at <https://vimeo.com/843214855>

16:41 - 16:46

Losing my pilot medical certificate

Captain Bruce Bellamy

Airbus Captain

16:46 - 17:10

Aerotoxic Syndrome Case Series and Survey, as Reported by the Georgia Poison Center

Stephanie Hon, PharmD, DABAT, FAACT

Georgia Poison Center

17:11 - 17:46

Aircraft fume events: A narrative review and medical protocol for the investigation of aircrew and passengers exposed to aircraft contaminated air and the health consequences of exposure. Practical guideline prepared by the International Fume Events Task Force

Professor Vyvyan Howard, FRCPath

Centre for Molecular Biosciences, University of Ulster

17:47 - 18:00

Discussion and Q&A

18:01 - 18:04

Comfort Break

SESSION TEN: Filtration solutions and the future

18:05 - 18:45

BASF Ozone-VOC Converters:

Next Generation Technology in Cabin Air Quality

Chris DiPaolo

Global Marketing Manager – Aerospace, BASF

18:46 - 19:19

To solve or not to solve: The art of delay

Judith Anderson

Industrial Hygienist, AFA-CWA

19:20 - 19:49

Discussion and Q&A

19:50 - 20:00

Conference closing comments

Captain Tristan Loraine BCAi

Conference Director

CONFERENCE ENDS

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