

Online Program available:

<https://npc23.scg.ch/>

## Program Overview

All indicated times are in CEST (GMT +2). **Convert CEST into any time zone.**

### Monday 19<sup>th</sup>, June 2023

19:00 Rooftop Welcome Party  
Sponsored by VERT

### Tuesday 20<sup>th</sup>, June 2023

09:00 Welcome, Instructions

09:10 Keynote Lecture by Claudia Mohr, Aerosol Chemistry, ETH and Head of Laboratory for Atmospheric Chemistry, PSI

09:40 Session 1: Aircraft, marine and other non-road sources  
*Chair: Norbert Heeb*

10:40 Coffee Break

11:00 Session 2: Biomass, biofuel- and synfuel combustion  
*Chair: Martin Gysel-Beer*

12:30 Lunch Break

13:30 Poster Session (even numbers)

15:00 Coffee Break

15:30 Session 3: Brake and tyre wear, on-combustion emissions  
*Chair: Christoph Hüglin*

17:00 Aperitif offered by the exhibitors

### Wednesday 21<sup>st</sup>, June 2023

09:00 Session 4: Particle emissions control of combustion engines (Part A)  
*Chair: Danilo Engelmann*

10:30 Coffee Break

11:00 Session 5: Particle emissions control of combustion engines (Part B)  
*Chair: Laretta Rubino*

12:30 Lunch Break

13:30 Poster Session (odd numbers)

15:00 Coffee Break

15:30 Session 6: Nanoparticle metrology and chemical characterization  
*Chair: Konstantina Vasilatou*

17:00 End of Conference Day 2

18:00 Alphorn Trio Concert, Alphornbläser Vereinigung Zürich Stadt

19:00 Dinner Party at ETH Polyterasse

### Thursday 22<sup>nd</sup>, June 2023

09:00 Session 7: Health effects  
*Chair: Barbara Rothen-Rutishauss*

10:30 Coffee Break

11:00 Session 8: Nanoparticle Formation and transformation  
*Chair: Oliver Bischof*

12:00 Award Ceremony  
*Chair: Oliver Bischof*

12:30 Lunch break

Focus Event: Indoor air filtration of biogenic and combustion nanoparticles  
*Chair: Loretta Müller*

13:30 Part 1

15:00 Coffee Break

15:30 Part 2 (incl. Panel Discussion)

16:50 Goodbye

17:00 End of the Conference

QR-code program Tuesday



QR-code program Wednesday



QR-code program Thursday



Detailed programs (next pages) for:

Tue, June 20,

Wed, June 21,

Thu, June 22.

<https://npc23.scg.ch/program1/tuesday>

<https://npc23.scg.ch/program1/wednesday>

<https://npc23.scg.ch/program1/thursday>

## Program Tuesday 20<sup>th</sup>, June 2023

All indicated times are in CEST (GMT +2). Convert CEST into any time zone.



- 09:00 **Norbert Heeb**, Empa  
«Welcome, Introduction and Conference Opening»
- 09:10 **Claudia Mohr**, ETH, Laboratory for Atmospheric Chemistry, PSI  
«Keynote Lecture: Nanoparticles, climate and health: From observation to impact»

### Session 1: Aircraft, marine and other non-road sources

Chair: Norbert Heeb, Empa Dübendorf

- 09:40 **Zachary Decker**, Paul Scherrer Institute PSI  
«Connecting size-resolved aerosol composition and gas-phase volatile emissions from aircraft engines at the Zürich airport»
- 10:00 **Tobias Schripp**, German Aerospace Center (DLR)  
«Field Study on the Impact of Sustainable Aviation Fuels on Helicopter Engine Emissions»
- 10:20 **Lukas Durdina**, ZHAW Zurich  
«Swiss research of particle emissions reduction with sustainable aviation fuels»
- 10:40 Coffee Break

### Session 2: Impact on climate and biomass, biofuel- and synfuel combustion

Chair: Martin Gysel-Beer, Paul Scherrer Institut (PSI), Villigen

- 11:00 **Joel Ponsonby**, Imperial College London  
«Jet aircraft lubrication oil droplets as contrail ice-forming particles»
- 11:20 **Claudia Marcolli**, ETH Zurich  
«Heterogeneous ice nucleation of soot particles: measurements, predictions and implications»
- 11:40 **Sohana Debbarma**, Indian Institute of Technology Bombay  
«Aerosol optical properties measured from two heterogenous mix of Indian vehicular fleets»
- 11:50 **Jun Zhang**, Paul Scherrer Institute PSI  
«Chemically resolved volatility of biomass burning emission»
- 12:10 **Marvin Laboureur**, University of Namur  
«Catalytic solutions for the cleansing of wood stove emissions: a physico chemical characterization of effluents generated by wood combustion and their maturation in the atmosphere»
- 12:20 **Simone Lixi**, Innovhub - SSI  
«Particulate matter and CO<sub>2,eq</sub> emissions from three Euro 6d bi-fuel LPG passenger cars, fed by an innovative LPG/DME 80/20 (V/V) blend»
- 12:30 Lunch Break

### Poster Session (even numbers)

- 15:00 Coffee Break

### Session 3: Brake and tyre wear, non-combustion emissions

Chair: Christoph Hüglin, Empa Dübendorf

- 15:30 **Yusuf Khan**, Cummins Inc.  
«Evaluation of Tailpipe Solid Particle Number Measurement Methodologies»
- 15:50 **Ioannis Raptis**, Aristotle University Thessaloniki  
«Evaluation of a miniaturized exhaust emission measuring system using an optoacoustic BC sensor and low-cost gas sensors»
- 16:10 **Jon Andersson**, Ricardo Chemical Risk Management  
«Particle Emissions from Brake and Tyre Wear – Results from the Phase 1 study for the UK DfT»
- 16:30 **Brenda Lopez**, University of California Riverside CE-CERT  
«Elemental content of brake and tire wear PM<sub>2.5</sub> and PM<sub>10</sub> at Near-Road Environments»
- 16:50 **Carlos Agudelo**, Link Engineering Company  
«CARB updates to EMFAC brake emissions factors using dynamometer tests for light-duty vehicles»
- 17:00 Aperitif (Sponsored by exhibitors), and End of Day 1

## Program Wednesday 21<sup>st</sup>, June 2023

All indicated times are in CEST (GMT +2). Convert CEST into any time zone.



### Session 4: Particle emissions control of combustion engines (Part A)

Chair: Danilo Engelmann, BFH/AFHB, Biel

- 09:00 **Silvana Di Iorio**, Institute of Science and Technology for Sustainable Energy and Mobility (STEMS) - CNR  
«Physical and chemical characterization of the particles emitted by a hydrogen fueled DI SI engine: the role of lube oil»
- 09:20 **Leonid Tartakovskiy**, Technion - Israel Institute of Technology  
«An updated mechanism of particle formation in non-premixed hydrogen combustion in internal combustion engines»
- 09:40 **David Kittelson**, University of Minnesota  
«Engine crankcase particulate matter: Measurement issues»
- 09:55 **Andreas Mayer**, VERT  
«Millions of Soot Filters mitigating Climate Change»
- 10:10 **John Santos**, Chung Yuan Christian University  
«The Influence of a Diesel Particulate Filter with Low-Temperature Regenerability on Diesel Engine Emissions»
- 10:30 **Hiroyuki Yamada**, Tokyo Denki University  
«Off-Cycle Emissions of Particle Number from Gasoline and DPf diesel passenger cars in extremely low temperature and high-load conditions»
- 10:40 Coffee Break

### Session 5: Particle emissions control of combustion engines (Part B)

Chair: Laretta Rubino, VERT Association

- 11:00 **Stanislav Bohac**, U.S. Environmental Protection Agency  
«PM Mass-Based Standard for Achieving PM Emissions Commensurate with Model Year 2022 GPF Technology for Light-Duty and Medium-Duty Vehicles»
- 11:20 **Imad Khalek**, Southwest Research Institute  
«New Proposed Light-Duty PM Mass Regulations in the USA: Can it be Controlled and Measured»
- 11:40 **Andreas Nowak**, PTB  
«Improving counting efficiency and linearity beyond the on-road emission measurement regulations for Portable Emissions Measurement Systems (PEMS)»
- 12:00 **Kazuhiro Yamamoto**, Nagoya University  
«Effects of GPF substrate structure on pressure drop and filtration efficiency»
- 12:20 **Sven Kureti**, TU Bergakademie Freiberg  
«Catalytic Soot Oxidation in Gasoline Engine Exhaust»
- 12:30 Lunch Break

### Poster Session (odd numbers)

- 15:00 Coffee Break

### Session 6: Nanoparticle metrology and chemical characterization

Chair: Konstantina Vasilatou, METAS

- 15:30 **Oliver Bischof**, Institute of Energy & Climate Research IEK-8/ TSI GmbH  
«Application-Specific Calibration of Condensation Particle Counters for Use at Reduced Pressure Conditions»
- 15:50 **Vinicius Berger**, Catalytic Instruments GmbH & Co. KG  
«Determining the Impact of Sulfur Exposure on Catalytic Stripper Performance Using Propane Oxidation Efficiency Measurements»
- 16:10 **Patrick Weber**, Forschungszentrum Jülich  
«A New Working Fluid for Condensation Particle Counters with Proprietary Benefits»
- 16:30 **Michal Vojtisek**, Czech University of Life Sciences in Prague  
«Roadside detection of excess particle emitters: practical limits & potential for garage-grade" instruments»
- 16:50 **Tobias Hammer**, Federal Institute of Metrology METAS  
«Influence of the type of soot generator on counting efficiency of PN-PTI instruments»
- 17:00 End of Day 2
- 18:00 **Alphorn Trio Concert, Alphornbläser Vereinigung Zürich Stadt**
- 19:00 **Dinner Party at ETH Polyterasse**

## Program Thursday 22<sup>nd</sup>, June 2023

All indicated times are in CEST (GMT +2). Convert CEST into any time zone.



### Session 7: Health effects

Chair: Barbara Rothen-Rutishauser, AMI, University of Fribourg

- 09:00 **Jakob Usemann**, University of Zurich / UKBB Basel  
«Air pollution and lung development in the child»
- 09:20 **Alfred Lawrence**, Isabella Thoburn College  
«Health risk assessment of Sub-Micron Particles and Heavy Metals on Children in North Indian Indoor Air – An Interim Analysis»
- 09:40 **Tina Buerki-Thurnherr**, Empa  
«Early life health impact of diesel exhaust particles: Unravelling placental accumulation, fetal transfer and interference with maternal-fetal communication»
- 10:00 **Inge Scharpf**, IUF - Leibniz Research Institute for Environmental Medicine  
«Tire wear and ambient temperature - Their accelerating effect on neurodegenerative diseases and aging in the animal model *Caenorhabditis elegans*»
- 10:30 Coffee Break

### Session 8: Nanoparticle formation and transformation

Chair: Oliver Bischof, TSI Incorporated

- 11:00 **Angela Violi**, University of Michigan  
«Investigating the transition from gas-phase species to nanoparticle formation in high temperature regimes»
- 11:20 **Una Trivanovic**, ETH Zurich  
«High-throughput generation of aircraft-like soot: Dynamics of soot surface growth and agglomeration by enclosed spray combustion of jet fuel»
- 11:40 **Alessia Pignatelli**, Università degli Studi di Napoli Federico II  
«Formation, Growth, and Photochemical Aging of Laboratory-Generated Nanoparticles»

### 12:00 Award Ceremony

Chair: Oliver Bischof, TSI Incorporated

- 12:30 Lunch Break

### Focus Event: Indoor air filtration of biogenic and combustion nanoparticles

Chair: Loretta Müller, DMBR University of Bern, Kinderklinik Bern

#### Part 1

- 13:30 **Joachim Frey**, University of Bern, Vetsuisse  
«Filtration of Bioparticles: Filters on a test bench»
- 13:50 **Joerg Mayer**, NanoCleanAir  
«Aerodynamics and Filtration Conditions for Bio-Aerosol Protection shown for the NanoCleanAir Baldachin, a Hospital Bed Protection System for an Intermediate Care Setting»
- 14:10 **Ernest Weingartner**, UASNW  
«Physical properties of virus-containing aerosol particles»
- 14:30 **Michael Riediker**, SCOEH (Swiss Centre for Occupational and Environmental Health)  
«Clean air against pathogens: the role of air flow and ventilation»
- 14:50 **Giorgio Buonanno**, University of Cassino and Southern Lazio  
«The airborne transmission of respiratory pathogens: the importance of ventilation and air distribution in the infection risk»
- 15:10 Coffee Break

#### Part 2 (incl. Panel Discussion)

- 15:45 **Tamar Kohn**, EPFL Lausanne  
«Aerosol pH is an overlooked driver of airborne influenza- and corona viruses inactivation»
- 16:00 Panel Discussion
- 16:50 Closing Word and Goodbye
- 17:00 End of the Conference

## NPC-23 Poster Program (get pdf from *printable poster program*)

Posters will be presented on Floor D (P-01 to P-29) and Floor Eo (P-30 to P-61)

**Poster Session 1**, with **even** poster numbers, **Tuesday**, June 20, 13.30 to 15.00.

**Poster Session 2**, with **odd** poster numbers, **Wednesday**, June 21, 13.30 to 15.00.

### Session 1: Aircraft, marine and other non-road sources

Chair: Oscar Mendo Diaz, Jules Hutter, Empa

- P-01 **Dr. Kåre Press-Kristensen**, Green Transition Denmark  
«Ultrafine particles from cruise ships and ferries in ports»
- P-02 **Dalho Shin**, Konkuk University  
«Exhaust Emission Characteristics according to Load Factor of Construction Machinery in Real-work Mode»
- P-03 **Ryubin Kwon**, University of Mokpo, Korea  
«Algorithm for Determining Abnormal Signs of Ship Propulsion Engines Using Machine Learning»

### Session 2: Ambient air particles, secondary pollutants

Chair: Oscar Mendo Diaz, Jules Hutter, Empa

- P-04 **Päivi Aakko-Saksa**, VTT Technical Research Centre of Finland  
«Semivolatile fraction's characteristics from engine and car exhaust»
- P-05 **Vikas Goel**, Indian Institute of Technology Delhi  
«Sources and Light Absorption Properties of Black Carbon over Delhi»
- P-06 **Dimitrios Tsalikis**, ETH Zurich  
«Mean free path of air: The impact of inelastic molecular collisions»
- P-07 **Katerina Karadima**, Particle Technology Laboratory, ETH Zurich  
«Molecular dynamics simulations of fullerene and silica nanoparticles diffusion coefficients in air»
- P-08 **Nora Nowak**, Paul Scherrer Institute  
«Optical and Chemical Properties of Wildfire Aerosol Plumes in the Free Troposphere»
- P-09 **Tana Zavodna**, Institute of Experimental Medicine of the Czech Academy of Sciences  
«Personal exposure monitoring of size-segregated aerosol and PAHs in recreational runners»
- P-10 **Ivan Iskra**, AethLabs, San Francisco, CA, USA  
«The new real-time source apportionment feature of the portable AethLabs microAeth black carbon monitor»

### Session 3: Biomass-, biofuel- and synfuel combustion

Chair: Oscar Mendo Diaz, Jules Hutter, Empa

- P-11 **Stijn Rijn**, University of Groningen  
«The optical properties of combustion generated particles from 1-D hydrogen doped ethylene flames»
- P-12 **Anssi Järvinen**, VTT Technical Research Centre of Finland  
«Reduced particle emissions from paraffinic diesel blended with polyoxymethylene dimethyl ether»
- P-14 **Faruk Aydin**, King Abdullah University of Science and Technology  
«Investigation of the influence of ammonia and hydrogen addition on soot formation in ethylene co-flow laminar diffusion flames»
- P-15 **Brett Bailey**, Global Clean Diesel  
«Realization of Efficient and Environmentally Sustainable Combustion of Sargassum and Waste Biomass»

#### Session 4: Brake and tyre wear, on-combustion emissions

Chair: Oscar Mendo Diaz, Jules Hutter, Empa

- P-16 **Hiroyuki Hagino**, Japan Automobile Research Institute  
«Exhaust and non-exhaust particle emission measurements using a road tunnel environment in Tokyo»
- P-17 **Harish Phuleria**, Indian Institute of Technology Bombay  
«Developing real-world emission factors for individual vehicles using low-cost sensors»
- P-18 **Silvana Di Iorio**, Institute of Science and Technology for Sustainable Energy and Mobility (STEMS) - CNR  
«Brake wear particles: effects of braking intensity, frequency and temperature»
- P-18 **Manuel Löber**, German Aerospace Center (DLR), Stuttgart, Germany  
«Formation and Morphological Appearance of Tyre Wear Particle Emissions»
- P-20 **Eric Thébault**, MANN+HUMMEL GmbH  
«Integrating a particulate filter system in the frontend: a step towards achieving emission-neutral vehicles»

#### Session 5: Emission control of combustion engines

Chair: Oscar Mendo Diaz, Jules Hutter, Empa

- P-21 **Shawn Kook**, The University of New South Wales  
«Evolution of nano-scale particle structures within a pilot-main injected jet fuel flame in a small-bore optical diesel engine»
- P-22 **Cheolwoong Park**, Korea Institute of Machinery and Materials  
«Study on the Effects of Operating Conditions on Nanoparticle Emissions in Direct Injection Ammonia Engines »
- P-23 **Yongrae Kim**, Korea Institute of Machinery & Materials  
«Comparison of particle number between the gasoline and hydrogen combustion engine and NOx reduction strategy in the hydrogen engine»
- P-24 **Lauretta Rubino**, VERT Association  
«HORIZON AeroSofd project: Retrofit Filtration Devices for Cleaner Urban Mobility - Focus on highly efficient filter systems for large scale petrol engine retrofit»
- P-25 **Christian Ferrarese**, Joint Research Centre (JRC)  
«Analysis of sub-micrometric particulate emitted by different types of internal combustion engines: a Raman Microspectroscopy study»
- P-26 **Irena Ježek Brecejl**, Aerosol d.o.o.  
«Monitoring vehicle emissions with the on-road chasing method over a decade»
- P-27 **Michal Vojtisek**, Czech University of Life Sciences in Prague  
«On-road & field measurement of exhaust flow of small engines»
- P-28 **Seongin Jo**, Chonnam National University  
«Comparative Study on Combustion and Emissions Characteristics in Dual-Fuel and Blended Fuel Combustion Modes using Ethanol/Diesel and Naphtha/Diesel»
- P-29 **Youngjae Jeon**, Korea National University of Transportation  
«A Study on Predicting CO2 Emissions Based on Calculated ECU Data and Deep Learning Model on Real-Driving Conditions for LDVs»

#### Session 6: Filtration of combustion and biogenic nanoparticles

Chair: Oscar Mendo Diaz, Jules Hutter, Empa

- P-30 **Yu-Mei Kuo**, Chung Hwa University of Medical Technology  
«Performance Evaluation Methods for Air Cleaners»
- P-31 **Aiswarya Kumar**, IIT Bombay, India  
«Comparison of charging mechanism, the efficiency of particle matter capture and generation of byproducts from different ionization based indoor pollution control technologies»

## Session 7: Health effects

Chair: Oscar Mendo Diaz, Jules Hutter, Empa

- P-32 **Battist Utinger, University of Basel**  
«Online Quantification of Oxidative Potential from and Residential Wood Combustion (RWC) and Car Exhaust Aerosol»
- P-33 **Anam Taushiba, Integral University**  
«Microbial Indoor Air Contaminants and Its' Health Risk Assessment in different microenvironments of Lucknow: capital of most polluted State of India»
- P-34 **Amin Piri, Yonsei University**  
«Nano-dry-salt deposition on electret nonwoven confers anticoronaviral effect while retaining aerosol filtration performance»
- P-35 **Amin Piri, Yonsei University**  
«Aero-manufacture of nanobulges for an in-place anticoronaviral on air filters»
- P-36 **Alexandre Barth, University of Basel**  
«Online Measurements of Oxidative Potential and Particle-bound Reactive Oxygen Species of Aircraft Turbine and Ship Engine Particulate Emissions»
- P-37 **Antonietta Gatti, Nanodiagnosics Foundation**  
«Nano- and microparticles in babies' brain in SIDS cases»
- P-38 **Felix Scholkmann, University of Zurich**  
«Nano- and microparticles in human blood: An analysis of the eluate from double filtration plasmapheresis»
- P-39 **Shreya Dubey, Indian Institute of Technology Bombay**  
«Toxicity of Respirable Particulate Matter of Traffic Origin: Effect of Different Driving Conditions and Fleet Characteristics»
- P-40 **Srishti Jain, IIT Delhi**  
«Heavy metal characteristics and health risk assessment of PM<sub>2.5</sub> over Delhi, India»
- P-61 **Penelope Baltzopoulou, CPERI/CERTH**  
«Air to Liquid Interface (ALI) cell exposure under transient driving of gasoline vehicles»

## Session 8: Indoor particles

Chair: Oscar Mendo Diaz, Jules Hutter, Empa

- P-41 **Julie Johansen, Technical University of Denmark**  
«Indoor particle pollution from residential wood stoves»
- P-42 **Elisa Caracci, University of Cassino and Southern Lazio**  
«Physical and chemical characterization of indoor particle sources»
- P-43 **Paul Sermon, Brunel University**  
«Comparison of outdoor and indoor emissions of ultrafine particles (UFPs) generated by combustion»
- P-59 **Felix M Walcher, ETH Zurich**  
«An interactive and playful air quality sensor as an alternative approach to foster students' awareness of bad air quality exposure»

### Session 9: Nanoparticle chemistry and toxicology

Chair: Oscar Mendo Diaz, Jules Hutter, Empa

- P-44 **Govind Gupta**, Swiss Federal Laboratories for Materials Science and Technology (Empa)  
«2D-hexagonal boron nitride and lung exposure: Exploring cellular interaction and potential health effects in bronchial and alveolar airway epithelial cell models»
- P-45 **Kludia Köbölová**, Brno University Technology  
«Potential ecotoxicity of biomass combustion-derived fine and ultrafine particles»
- P-46 **Paul Sermon**, Brunel University  
«Biomonitoring of airborne- and waterborne- ultrafine particles (UFP) emitted from combustion»
- P-47 **Angela Violi**, University of Michigan  
«Interactions of PAHs and nanoparticles with biological systems»

### Session 10: Nanoparticle formation and transformation

Chair: Oscar Mendo Diaz, Jules Hutter, Empa

- P-48 **Moritz Schenker**, ETH Zurich  
«Crystallization of Ag-Au alloyed Nanoparticles by Molecular Dynamics»
- P-49 **Yi Wang**, ETH Zurich  
«Crystallization Onset of Aerosol Au Nanoparticles»

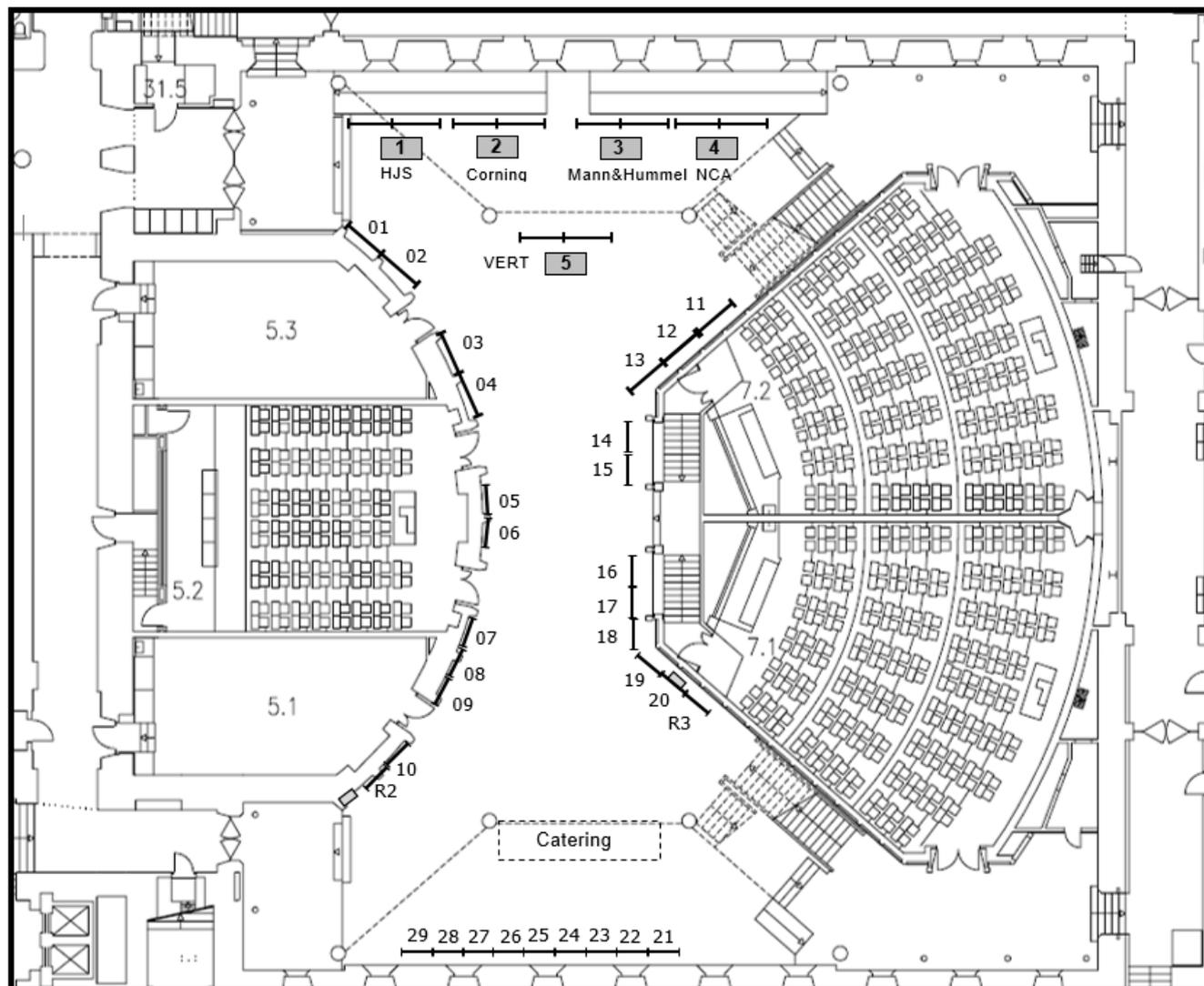
### Session 11: Nanoparticle metrology and chemical characterization

Chair: Oscar Mendo Diaz, Jules Hutter, Empa

- P-50 **Hans-Joachim Schulz**, Catalytic Instruments GmbH & Co. KG  
«Impact of Operating Conditions on the Performance of a Silver Particle Generator»
- P-51 **Kingsley Reavell**, Cambustion Ltd  
«The M2AS - Mass and Mobility Aerosol Spectrometer»
- P-53 **Juergen Spielvogel**, TSI GmbH  
«Upcoming standardization for charge conditioners used in particle characterization and for the generation of calibration and test aerosols – ISO 19996»
- P-54 **Franz Friebe**, -  
«Carbon Black vs Black Carbon – Application-oriented Analysis of Nanomaterials»
- P-55 **QiZhi Xu**, Paul Scherrer Institut  
«Assessing the potential to improve polarimetric aerosol property retrievals for black carbon aerosol»
- P-56 **Konstantina Vasilatou**, Federal Institute of Metrology METAS  
«Standardisation of Black Carbon aerosol metrics for air quality and climate modelling (EPM StanBC Project)»
- P-57 **Tobias Klein**, Physikalisch-Technische Bundesanstalt  
«Traceable size measurement of polystyrene particles for calibration of particle counters using SEM in transmission mode»
- P-58 **Ayush Agarwal**, Paul Scherrer Institute (PSI) & École Polytechnique Fédérale Lausanne (EPFL)  
«Size resolved elemental analysis of bimetallic nanoparticles using SMPS-ICPMS»

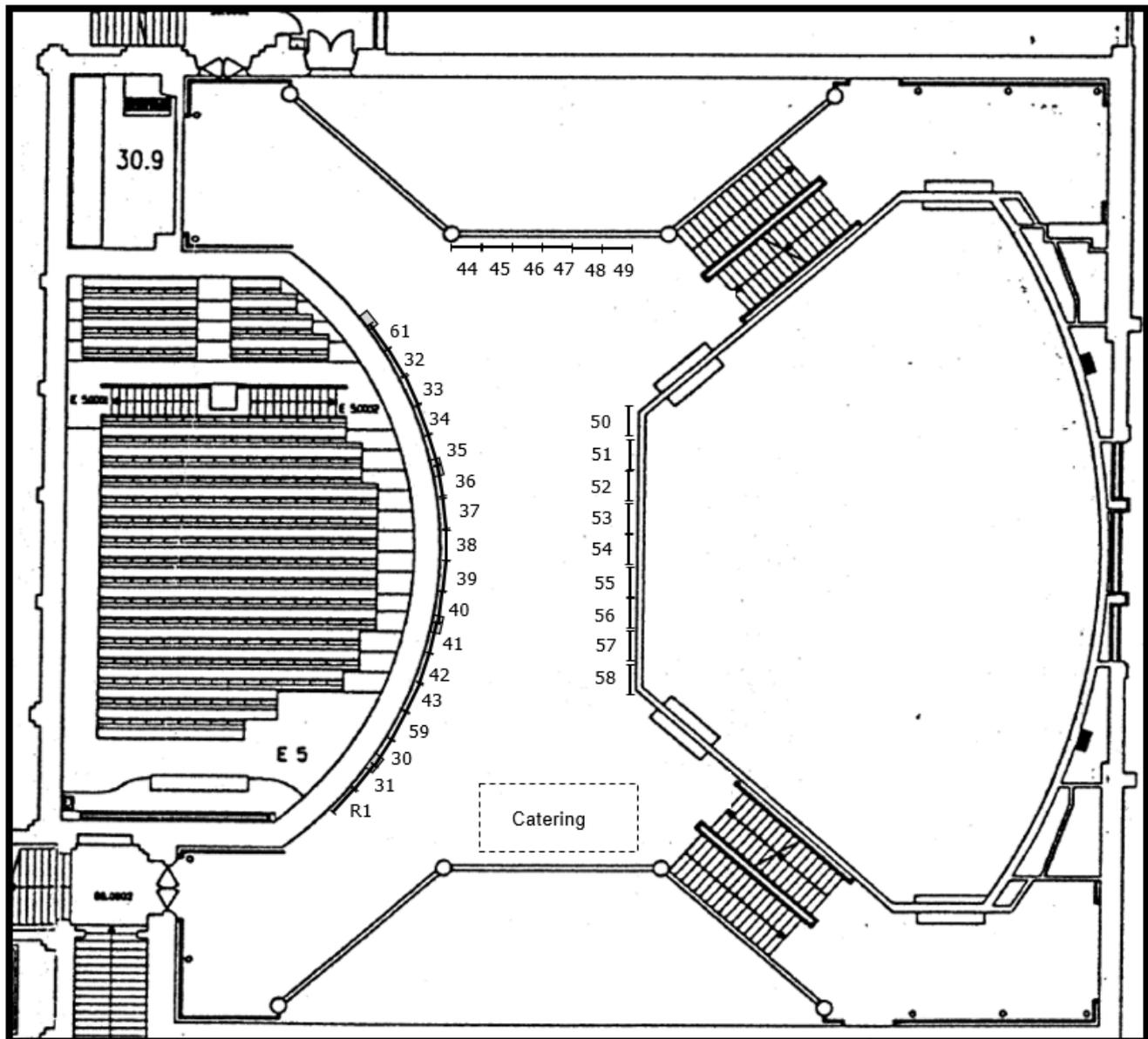
# Floor plans for poster sessions and exhibitions

## Foyer, Floor D: Posters P-01 – P-29 and Exhibition 2

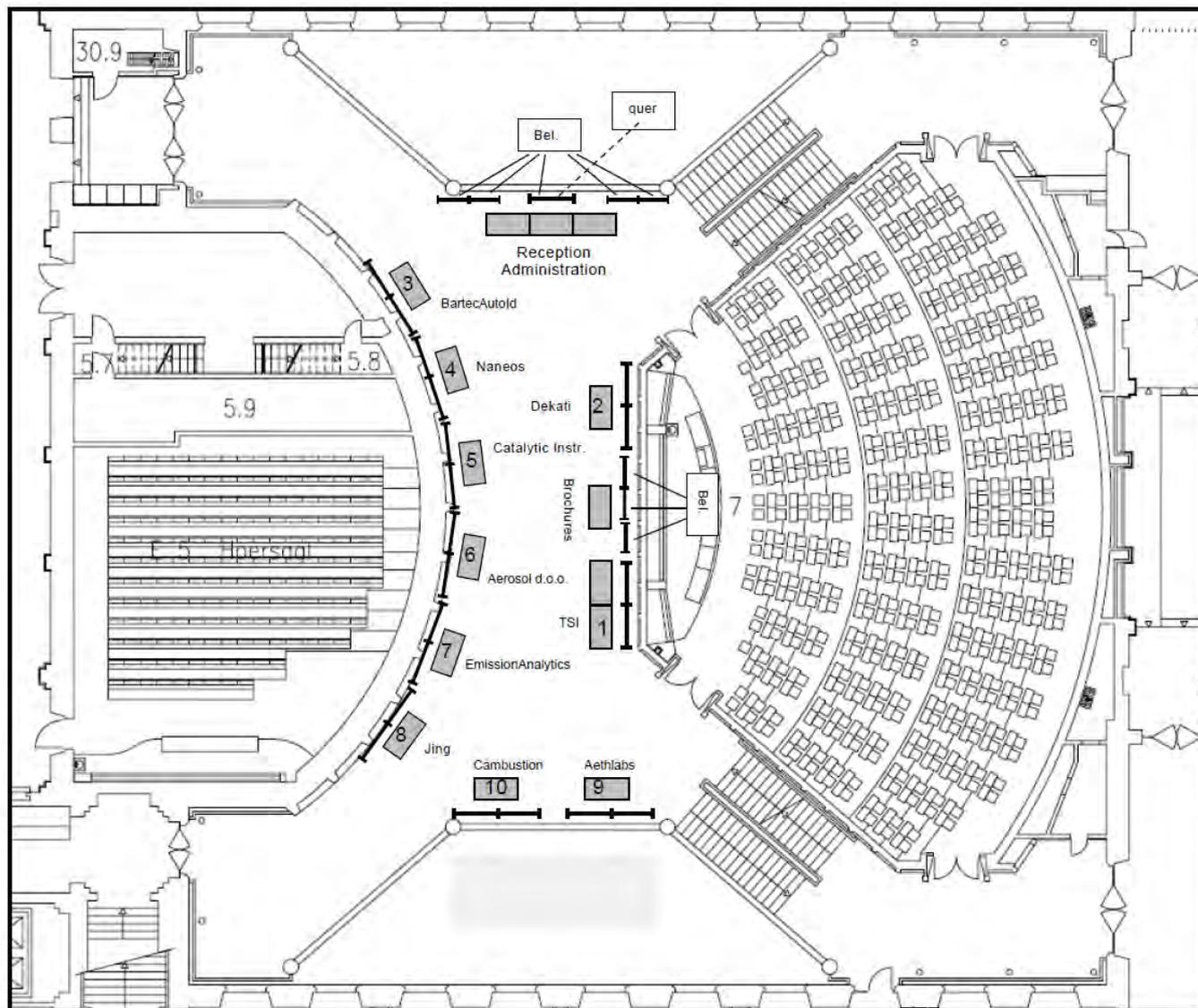


Visit exhibitors on D-Floor booth 1 to 5

Foyer, Floor Eo: Posters P-30 to P-61

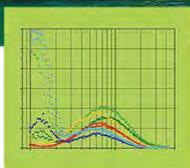


## Foyer, Floor E: Reception and Exhibition 1



**Visit exhibitors on E-Floor booth 1 to 10**

# Sponsors, Supporters and Exhibitors



June 20 – 22, 2023, ETH Zürich, Switzerland

The 26th ETH Nanoparticles Conference is kindly supported by:



**ETH zürich**



 Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra



Federal Office of Civil Aviation FOCA  
Federal Office for the Environment FOEN



## List of Exhibitors

<b>Location</b>	<b>Exhibitors Floor D, Particle Filter Technology</b>
Floor D, Booth 1	HJS
Floor D, Booth 2	Corning
Floor D, Booth 3	Mann+Hummel
Floor D, Booth 4	NanoCleanAir
Floor D, Booth 5	VERT Association
<b>Location</b>	<b>Exhibitors Floor E, Instrumentation</b>
Floor E, Booth 1	TSI
Floor E, Booth 2	DEKATI
Floor E, Booth 3	BARTEC AUTO ID
Floor E, Booth 4	naneos
Floor E, Booth 5	Catalytic Instruments
Floor E, Booth 6	AEROSOL MAGEE SCIENTIFIC
Floor E, Booth 7	Emissions Analytics
Floor E, Booth 8	JING
Floor E, Booth 9	AETHLABS
Floor E, Booth 10	Cambustion

## **Exhibitors CVs (alphabetic order)**

### **Aerosol Magee Scientific instruments (Floor E, Booth 6)**

Aerosol Magee Scientific instruments are installed in more than 70 countries on all continents. They are deep underground to monitor diesel exhaust in mines and at the Base Camp of Mt. Everest to measure the regional pollution of remote locations. Our instruments are used at research stations from the Amazon Jungle to the Sahara Desert; from Spitzbergen to the South Pole. Our instruments are installed in agency stations from San Francisco to Shanghai, from Dublin to Delhi, and everywhere in between. They are used for fundamental research, air quality monitoring, environmental engineering, and other applications.

### **AethLabs (Floor E, Booth 9)**

AethLabs designs and manufactures high quality portable environmental and personal exposure Black Carbon monitoring instruments. The microAeth® MA series instruments are multi-wavelength Black Carbon particulate matter monitors which can distinguish between traffic and biomass emissions. In addition to being able to run continuously and unattended, the microAeth® MA series instruments offer many advanced measurement features while being integrated into battery powered, lightweight and compact form factors which are small enough to be worn on-person, or fly on UAVs

### **Bartec Auto ID (Floor E, Booth 3)**

The principal activities of Bartec Auto ID have historically been the development and manufacture of Tyre Pressure Monitoring Systems (TPMS) for the automotive industry and aftermarket and the development of waste management systems for domestic and trade waste. The company has added emissions monitoring analysers and systems and extended its range of aftermarket tools through historic acquisitions and new R & D investment. The in-house development of Particle Number Counting technology has been a core focus recently with the new nano Emissions Counter (nEC) designed to meet regulatory requirements for DPF control as part of Periodic Technical Inspection (PTI/MOT).

### **Cambustion (Floor E, Booth 10)**

Cambustion has been developing and manufacturing aerosol and gas measurement instruments for over 30 years. We are leaders in fast response measurements, with the DMS500 instrument able to make aerosol size distribution measurements at 10 S/s with an unrivalled 200ms T<sub>10-90</sub> time response. The CPMA and new M<sup>2</sup>AS instruments provide characterisation of aerosols in terms of particle mass with many advantages over traditional sizing techniques. The AAC instrument allows direct characterisation of the aerodynamic diameter of particles also avoiding multiple charge artefacts. We also offer a wide range of supporting products such as the new AF10 aerosol flowmeter.

## Catalytic Instruments (Floor E, Booth 5)

Catalytic Instruments is a German company specializing in innovative aerosol instrumentation based on **Catalytic Stripper** technology. The **Catalytic Stripper** contains a heated catalytic element used to remove the semi-volatile fraction of an aerosol sample (solutions for a range of flowrates from 0.7–25 L/min). Applications include combustion exhaust measurements, ambient studies, and air quality research.

Our **Catalytic Vapor Filter** converts noxious CPC exhaust vapor into clean air (up to 5 L/min). Furthermore, HEPA filters can be purchased directly through our online store. We also look forward to working directly with you to provide customized and tailored solutions.

## Dekati (Floor E, Booth 2)

Dekati Ltd. is a world leader in designing and manufacturing innovative fine particle measurement solutions. We have 30 years of experience in providing measurement instruments and complete measurement solutions to a wide variety of environments and sample conditions. We take pride in the quality and robustness of our products and are committed to finding the best possible solution for your aerosol measurement needs. Our experience and expertise in aerosol measurement applications is at your disposal throughout the life-cycle of your investment via our global partner network. All Dekati® Products are developed and manufactured in Finland and are available with up to five-year warranty.

## EMISSIONS ANALYTICS (Floor E, Booth 7)

Emissions Analytics is proud to run testing projects globally. Headquartered near Oxford, in the United Kingdom, we have bases in North America and Europe, giving us the ability to test a multitude of applications in a wide range of locations.

Real-world tailpipe emissions testing is the foundation of our business and remains at our core today, working globally on applications ranging from cars to marine vessels. Over the years, we have established parallel divisions to tackle additional environmental challenges including vehicle interior air quality and, more recently, brake and tyre pollution.

[info@emissionsanalytics.com](mailto:info@emissionsanalytics.com)

## HJS (Floor D, Booth 1)

HJS Emission Technology GmbH & Co. KG is an industry leader providing solutions in the field of emission exhaust-gas aftertreatment and industrial filtration.

Current focus is centered on the emissions reduction of soot particles (PM) and nitrogen oxides (NO<sub>x</sub>) of combustion engines and in addition on creative solutions for the reduction of industrial hot gas emissions.

HJS is making a significant contribution to meeting environmental and climate targets worldwide. The innovative technologies will be used for original equipment, for retrofitting of passenger cars or commercial vehicles as well as for a wide range of non-road mobile machinery and stationary and air pollution control applications.

## **JING Ltd. (Floor E, Booth 8)**

JING Ltd, a Swiss company founded in 2021, is a worldwide leading company which develops real soot particle generating technologies and provides different types of high-performance soot particle generators for calibration, filter test and research activities on particulate emissions from combustion processes in firing, combustion engines of automobile, ship and airplane respectively.

The JING CAST soot generators are characterized by high precision, good repeatability, durability, easy handling and high safety standard. Visit our booth for more information.

## **MANN+HUMMEL (Floor D, Booth 3)**

MANN+HUMMEL is a leading global company in filtration technology. Under its two business units Transportation and Life Sciences & Environment, the Ludwigsburg-based Group (Germany) develops intelligent filtration and separation solutions that enable cleaner mobility, cleaner air, cleaner water, and cleaner industry. Fine dust is a danger to human health and pollutes the environment. The passive brake dust particle from MANN+HUMMEL filter with non-woven metal fibers is fitted directly to the caliper and directly retains particle emissions on the brake. The filter fits in all existing installation spaces and can be adapted to different brake sizes and concepts.

## **naneos (Floor E, Booth 4)**

After over a decade of experience in nanoparticle instrumentation development, we are still striving to build instruments that are easier to use and require less maintenance than traditional nanoparticle detectors. Our philosophy is to keep things simple - in engineering, simple automatically means robust. Our flagship product is the partector 2, an ultra-portable multimetric aerosol sensor. Recently, we have taken over the HEPaC (Handheld Emission Particle Counter) from the FHNW University, which is very useful for diesel particle filter checks in the field. We are also developing OEM sensors for engine emission measurements. For more information visit our website [www.naneos.ch](http://www.naneos.ch)

## **NanoCleanAir (Floor D, Booth 4)**

Traffic Aerosols and Bioaerosols, we can eliminate both. Starting 2020 we have demonstrated this in classrooms, in elevator cabins and in hospitals to protect both: uninfected patients from one infected or one freshly operated patient from all pathogenic particles and germs which may be around as aerosols. A new ceramic cell filter with very high surface/bulk and a pore structure which traps even 50 nm viruses by 99.9999 % makes it possible and offers many options like active charcoal gas adsorption, periodic hot sterilization, catalysis with simple cleaning and endless life, a closed circuit technology. The Baldachin-design is exhibited (booth Nr. 4) and already in place in medical studies.

NanoCleanAir GmbH offers a completely new approach for clean air – really clean from traffic related carcinogens as well as pathogenic bioaerosols customized.

[www.nanocleanair.ch](http://www.nanocleanair.ch)

## **TSI (Floor E, Booth 1)**

TSI® is the leading provider of instruments to study airborne particles in various applications in both the laboratory and the field. At this year's ETH Conference, we are presenting solutions for the:

- Monitoring of ultrafine particles in ambient air
- Characterization of PM concentrations and size distributions from brake wear
- Professional calibration of particle counters onsite.

Please visit us at our booth!

### **Contact:**

**TSI GmbH**

Neuköllner Strasse 4

52068 Aachen

Germany

Telephone: +49 241-52303-0

Fax: +49 241-52303-49

E-mail: [TSI.EMEA@tsi.com](mailto:TSI.EMEA@tsi.com)

Web: [www.tsi.com](http://www.tsi.com)

## **VERT (Floor D, Booth 5)**

### **Air Pollution in professionally used Vehicle Cabins must be reduced.**

VERT has provided solutions already in 2008 but no legislation followed. Now we have a new CWA 17934 Standard to measure vehicle cabine pollution and new proposals of WHO for limit values: >10'000 particles/cc should not be accepted. There is also much more information on health effects with professional drivers published. We thus feel that the time is come, to start a new project with European occupational health organizations with the double target: to set up limit values in professional vehicle cabins by solid particle number count and to demonstrate that VERT and VERT related industry is perfectly able to supply the required technology for first fit and retrofit at benefit-oriented cost.