

## 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»

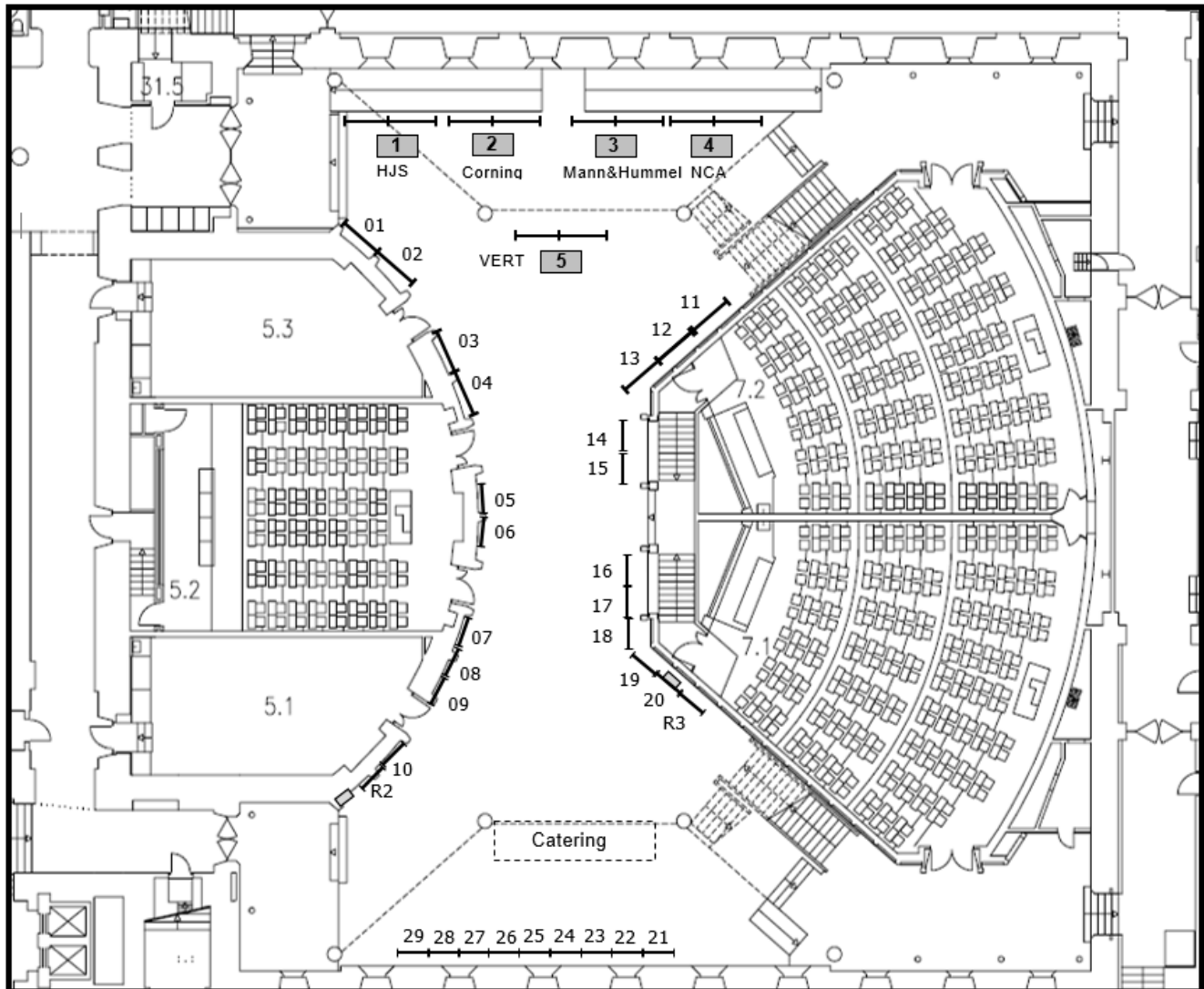
### Session 11: Nanoparticle metrology and chemical characterization

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



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

