

13th VERT Forum, March 21st 2023

NEW VERT NANOPARTICLE ABATEMENT TOOLS FOR HEALTH AND GLOBAL WARMING

Registration

[Registration Link 13th VERT FORUM 2023](#)

There is no participation fee (registration needed)

The conference will start at 9 am and end at 6 pm CEST.

Conference opens at 08:30 am / ends at 18:00

The Conference is also virtual - **ZOOM Online Link will be available for registered participants**

SPONSORS: EMPA

Conference venue

“Akademie” Room - EMPA, Überlandstrasse n. 129
8600 Dübendorf, Switzerland

Highlights of the 13th VERT[®] Forum

Expertise in emission control now applied to provide solutions to urgent global problems

- **Mitigation of Global Warming** by elimination of Black Carbon (BC) through filtration and proposing the introducing for CO₂-credits for BC equivalents → a fast and powerful tool to reduce global warming
- **GPF-retrofit within HORIZON Europe AeroSolfid Project** → to support EU for 5 Mio retrofits in LEZ 2025
- **NPTI-PN as unique solution** for emission control of not only Diesel but also Petrol engines of any application → to eliminate high emitters, support legislation and go global with new instrumentation
- **Cleaning breathing air in vehicle cabins**, the highest exposure to carcinogens → filling a high priority occupational health gap
- **Virus protection by cleaning indoor air** (schools and hospitals) from UFP and aggressive bioaerosols like viruses → to reach infection risk reduction of >95%

What VERT[®] stands for

An association dedicated to the promotion of Best Available Technology for emission control and ultrafine and nanoparticle emissions reduction via filtration means

The core objective of VERT[®] is the minimization of health effects caused by combustion engine emissions, especially the elimination of Ultra Fine Particles (UFP).

Members of VERT[®] are international manufacturers of engines, testing devices, DPF and SCR systems, as well as of substrate producers, chassis builders, among others.

VERT[®] stresses and recommends the application of particle number measurement against a pure particle mass metric. Ultra Fine Particles (UFP) cause a major threat to health.

We set the highest quality standards for emission control technology by certifying emission control technologies and publishing the VERT[®] filter list. [VERT-Filter list](#)

VERT[®] supports traffic pollution reduction programs all over the world, especially in megacities, occupational health and indoor.



Key Elements of the upcoming 13th VERT Forum - 21st March 2023 (9AM - 6 PM)

KEYNOTE SPEECH ON HEALTH EFFECTS OF ULTRA FINE PARTICLES – LATEST STUDIES

GLOBAL WARMING AND DPF/GPF BENEFICIAL EFFECTS

HORIZON EUROPE AEROSOLFD - GASOLINE VEHICLE RETROFIT

CABINE AIR POLLUTION / NON-TAILPIPE EMISSIONS (TYRES / BRAKES)

NEW PERIODIC TECHNICAL INSPECTION (PTI) FOR DPF AND GPF VEHICLES

VERT AND LEGISLATION

NEW VERT NANOPARTICLE ABATEMENT TOOLS FOR HEALTH AND GLOBAL WARMING

The VERT Association has been always working at international level to increase awareness of verified emissions reduction technologies, with focus on the best available technology (BAT) for combustion-generated nanoparticle applications and NOx emissions reductions. Increasing health concerns due to nanoparticle emissions, large in number but with very small sizes (nanoscale) are not just related to diesel but all type of engine combustion (i.e. gasoline) and need to be seriously monitored and controlled.

The VERT Forum is the perfect platform to discuss health, air quality and all emissions related issues in order to find the best solution by creating international collaborations with dedicated working groups, developing new strategies at national and international level and provide scientific evidence for policy makers and support emissions legislation.

VERT introduced the particle number (PN) criterion for health reasons, which is now the basis of European and Chinese legislation. VERT has successfully initiated the introduction of a New Periodic Testing Inspection (NPTI) system to ensure that products and technologies are not only functionable and efficient during test & validation but also during normal operation over time. NPTI for Diesel but also for Petrol with dedicated working groups discussions.

VERT by providing cost-efficient retrofit solution with Particle Filter to Diesel engines contributed over the years to reduce nanoparticle emissions, Black Carbon (BC) and CO₂ emissions with positive effects on Global Warming; now VERT is taking the new challenge of Gasoline vehicle retrofit with GPF within the Horizon Europe AeroSolfd project.

VERT continues his missions and uses new tools for nanoparticle abatement not only at the tailpipe but also for non-tailpipe generated nanoparticles such as emissions from tyres and brakes, with filtration able to improve in-cabin emissions and the overall air quality in closed and semi-closed environment. VERT uses an holistic approach for nanoparticle abatement using the best technologies at the tailpipe and non-tailpipe emissions application for global warming, environment and health.

VERT will continue his traditional retrofitting activity extended to Gasoline vehicles and will look also at new emissions-related areas where the VERT expertise can give a solid contribution with international collaborations, working groups and applied know-how discussing urgent emissions related issues every year in the VERT FORUM.

Join us!



Dr. Laurretta Rubino
VERT CEO



Lars Christian Larsen,
VERT President

08:30 – 09:00 am | door opening

09:00 am – 09:10

WELCOME

- Opening: *N.Heeb, EMPA*
- Welcome: *L.C. Larsen, VERT*
- Chair: *L.Rubino, VERT*

09.10 – 10.30

1. Horizon AeroSolfd for Petrol Engine Particle Elimination

- AeroSolfd – Cleaner urban air by retrofit filtration devices for tailpipe and more / *M.Lehmann, M&H*
- Exhaust particle elimination by GPF / *L.Rubino*
- New filter substrate performance / *D.Rose, Corning*
- Secondary emissions of GDI vehicles / *N.Heeb*

Coffee Break

10:50 – 11:10

2. The Contribution of DPF/GPF to Global Warming Mitigation

- The effect of 200 million particle filters / *A.Mayer, VERT*

11:10 - 11.50

3. Non-Exhaust Particles

- Primary and secondary aerosol emissions potential from tyres / *N.Molden, Emission Analytics*
- Particle Emissions from brake and tyre wear / *J. Andersson, Ricardo*

11:50 - 12.40

4. Cabine Air Pollution

- Results of a VERT project / *H.Burtscher, FHNW*
- New approach for characterising vehicle interior air quality – CEN CWA 17934 standard / *N.Molden*
- A new VERT occupational health project / *L.Rubino*

Lunch break

01:30 - 02:50

5. VERT and Legislation

- Euro 7 for further innovation in emission control technologies / *D.Bosteels, AECC*
- Legislation versus in-use fleet control / *H.Koch-Gröber, Uni Heilbronn*
- EU roadworthiness legislation and PN-measurement / *P.Szatmari, EU-Commission*
- How USA deals with emissions without PN limit values / *K.Brown, MECA*

02.50 - 03.40 m

6. Bioaerosols and Health Protection

- Filtration of bioparticles / *J.Frey, Uni Bern*
- Protecting classrooms and other indoors / *H.Burtscher*
- The hospital bed protection / *J.Mayer, NCA*

Coffee Break

04.00 – 05.00

7. New Periodic Technical Inspection for DPF and GPF Equipped Vehicles

- High Emitters in all vehicle fleets / *R.Wilce, wijs-air*
- New standards and instruments / *NMI*
- NPTI for Switzerland, 1.Jan.2023 / *J.Czerwinski, VERT*
- NPTI Petrol - a VERT working group / *K.Mathies, TÜV*

05.00 pm – 05.20 pm

8. New Markets and Applications

- Concepts for particle filter retrofitting of commercial vehicles in urban service / *Lefarth, HJS*

Closing Remarks

- *L.C. Larsen, VERT*

VERT Forum 2023 on March 21th

9 AM until 6 PM

Information for Attendees

The VERT Forum 2023 is LIVE and organized both as “in-person” and **virtual conference**.

As **technology** we use **Zoom Business**, one of the most common web conference tools these days.

We highly recommend to **use the zoom desktop app** and NOT the participation via web browser.

Please **download and install the app** on your computer before the event. If you are in a company network, you may need support of the technical team of your company for firewall parameters and settings.

You find zoom under: <https://zoom.us/download>

For entrance use your link from the registration.

It is mandatory to register before you are entering the conference. If you lost your registration link you can always register again and immediately join the conference again under:

Registration Email vert-forum-registration@vert-dpf.eu

We have decided that **all speakers at the VERT FORUM will present their presentation live**.

We are convinced that this procedure supports the exchange character of the VERT Forum more than pre-recorded videos.

There is an opportunity for you to **actively participate in the discussions** and to **interact via the chat with the speakers**.

Please take advantage of this opportunity and be part of a lively and active event.

All VERT FORUM speakers will present their presentation live

Presentations will be available a couple of days after the event on the VERT website for the participants.

We recommend a **minimum internet bandwidth of 16 Mbit download** so that everything runs "smoothly" on your computer. You can check this at: <https://speedof.me>

For questions and recommendations in advance, please contact:

For presentations: Dr. A. Mayer ttm.a.mayer@bluewin.ch

For any organizational topic:

Dr. L. Rubino - LR CONSULTING www.my-lrconsulting.com

lauretta@my-lrconsulting.com

A list of hotels can be found [here](#)

All Info on EMPA & location at: <https://www.empa.ch/>

Registration

Please register under the following Email address:

vert-forum-registration@vert-dpf.eu

There is no participation fee

The conference will start at 9 am (opening at 8:30 m) and last until 6 pm CEST

In case of any registration issues please contact

vert-forum-registration@vert-dpf.eu