



18th International Symposium
Transport and Air Pollution
May 18 – 19, 2010
Dübendorf, Switzerland

Final Program

Tuesday 2010-05-18



08:30	Welcome, Registration			Entrance
09:00	Opening	Martin Weilenmann		Room A
09:15	Keynote Talk: Local versus global air quality problems	Frank Raes, JRC	Chair: Brigitte Buchmann	Room A
09:50	Poster session 1 and coffee break			Congress tent
10:40	Session 1a: Roadside and Tunnel Studies	Room A	Session 1b: Non Road Traffic Emissions	Room B
	Chair:	Aurélie Charon	Chair:	Mario Keller
	Real-time vehicle emission monitoring along roadsides	R. de Lange	ALSTOM Hybrid shunter locomotive	R. Hesnard
	Speed dependence of NO ₂ /Nox emission ratio?	J. Thudium	Remote measurements of ship emissions: The SIRENAS-R Campaign	J. Balzani Lööv
	Emission factors for paved and unpaved roads - validation by tunnel and field measurements	M. Henn	Parallel monitoring compaines in an international Romanian airport	F. Popescu
	Interaction between road pavement and tyre studs cause emission of nanoparticles	M. Gustafsson	Ship emissions estimates based on AIS data	M. Winther
12:20	Lunch break			Congress tent
13:40	Session 2a: Emission Measurement	Room A	Session 2b: Air Quality Measurement and Modelling	Room B
	Chair:	Alan Gertler	Chair:	Johannes Stähelin
	Real-time analysis of aromatic compounds in vehicle emissions by Resonance-enhanced Multiphoton Ionization - Time-of-flight Mass Spectrometry (REMPI-TOFMS)	T. Adam	Size resolved ultra fine particle model for a traffic tunnel	B. De Maerschalck
	Particles emitted by 2- and 4-stroke engines: Aspects from chasing and test bench experiments	P. Dimopoulos	Impact of roadside noise barriers on particle size distributions and pollutants concentrations near freeways	C. Sioutas
	Investigations of diesel emissions with DPF + SCR in VERTdePN	J. Czerwinski	CO ₂ Distribution and transport in urban areas - A task for high resolution urban CFD	A. Gartmann
	Tailpipe emissions from garbage trucks in the metropolitan area of Milan, Italy, and their evolution by 2010	P. Dilara	Modeling estimation of the contribution of the road transport to the particulate matter concentration over Italy	A. Balzarini
15:20	Poster session 1 and coffee break			Congress tent
16:10	Session 3a: Electro and Hybrid Vehicles	Room A	Session 3b: Secondary Pollutants and Exposure	Room B
	Chair:	Stefan Hausberger	Chair:	Constantinos Sioutas
	Foresight of electric transport in France, an opportunity with a smart demand side management	E. Vidalenc	Long-term trend of direct NO ₂ emissions from urban road traffic in Zurich, Switzerland	Ch. Hueglin
	Electric vehicle and plug-in hybrid energy efficiency and life cycle emissions	H. Helms	City-Dwellers exposure to atmospheric pollutants when commuting in Paris urban area	H. Ravelomanantsoa
	Life cycle assessment of battery electric and internal combustion engine drivetrains for a small passenger car	A. Simons	Modeling of exposure to highway traffic exhaust in alpine valleys in Switzerland	R. Ducret-Stich
	Effect of battery performance on determining real-world CO ₂ emissions of hybrid electric vehicles under real-world conditions	R. Alvarez	Simultaneous study of gas phase and secondary organic aerosols' chemical composition	S. Rossignol
17:50	End of Sessions			
18:00	Transfer to conference dinner by coaches			In front of congress tent



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08:15	Welcome			Entrance
08:45	Keynote Talk: Air quality and GHG life-cycle and social-cost analysis of new propulsion technologies	Mark Delucchi, UC Davis	Chair: Zissis Samaras	Room A
09:20	Poster session 2 and coffee break			Congress tent
10:10	Session 4a: New Technologies	Room A	Session 4b: Emission Policies	Room B
	Chair:	Zissis Samaras	Chair:	Asif Faiz
	Performance of clean city bus technologies in real world traffic	S. Hausberger	Reduction of GHGs emissions from road transport in the major economies of the world and in the European Union: patterns of research and policy output and priorities	E. Vouitsis
	Emissions control systems and climate change emissions	J. May	Effects of GHG-certificate trade on transport demand in Austria	Ch. Link
	Investigation of guanidinium formate as novel ammonia precursor compound for selective catalytic reduction of NOx	D. Peitz	Air quality impact assessment of the environmental zone in Copenhagen	S.S. Jensen
	Combustion of mineral diesel and alternative fuels in a heavy duty on-road engine with combined NOx and particle exhaust gas aftertreatment	P. Soltic	CO2 emission and daily mobility: Factors for change the case of the Lyon urban area	L. Bouzouina
11:50	Lunch break			Congress tent
13:10	Session 5a: Emission Modelling 1	Room A	Session 5b: Biofuels 1	Room B
	Chair:	Mario Keller	Chair:	Christian Bach
	Development and evaluation of a generalised model for traffic induced road dust	J. Berger	Experimental evaluation of straight vegetable oil-diesel blends application on vehicle regulated and non-regulated exhaust emissions over legislated and real world driving cycles	Z. Samaras
	Potentials and costs for GHG mitigation in the transport sector	J. Borken-Kleefeld	The impact of biodiesel blends on emissions	A. Gertler
14:00	Poster session 2 and coffee break			Congress tent
14:50	Session 6a: Emission Modelling 2	Room A	Session 6b: Biofuels 2	Room B
	Chair:	Michel André	Chair:	Patrik Soltic
	Uncertainty and sensitivity analysis of COPERT 4	Z. Samaras	Carbonyl compounds in the exhaust from alternative fuels used in modern engines and from two stroke mopeds	C. Astorga
	Coupling of microscale traffic and emission models to minimize emissions with traffic control systems	M. Zallinger	Determination of VOC components in the exhaust of light vehicles fuelled with different biofuels	F. Cazier
	Speed-time profiles as a basis for emission modelling of road traffic – the example of Munich	F. Hülsmann	Emissions and fuel consumption of modern flexifuel and gasoline vehicles on various ethanol blends	L. Pelkmans
16:10	Closing of congress	Martin Weilenmann		Room A



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Poster Session 1

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Roadside and Tunnel Studies

99	PM10 emission factors for non-exhaust particles generated by road traffic in Switzerland	N. Bukowiecki et al.
39	The assessment of green house gases emissions from road transport along proposed bus rapid transit corridor in Lagos, Nigeria	A.F. Oluwole et al.
22	Determination of road transport primary NO ₂ (f-NO ₂) from measurement in a road tunnel	W. Simmons et al.
107	Air Quality in the Ile de France road tunnels (AIRTURIF project): presentation, methodology and preliminary results	A. Guilloteau et al.

Emission Measurement

1	Characterizing real world on-road emissions of in-use vehicles using PEMS in Delhi, India	A. Shukla
123	Passive and active regeneration modes and their characteristics on a modern diesel particulate filters system	A. Karpf et al.
30	Online characterization of gas and solid unregulated emission from two stroke mopeds	M. Clairotte et al.
P09	The influence of traffic conditions on primary NO ₂ tailpipe emissions and road-side pollutant concentrations	P.K. Hardy et al.
6	Portable emission measurement systems (PEMS) for PM measurements: Comparison of different techniques	L. Rubino
118	Netherlands in-service testing programme for emissions of heavy-duty engines and vehicles; developments from on-cycle to real world emissions	R. Vermeulen
P13	Influence of driving style on fuel consumption and emissions in diesel-powered passenger car	N. Fonseca et al.
124	Improvements in hydrocarbon measurement in exhaust tailpipe emissions	J.L. Blanc et al.
14	The on-road emission characteristics of UK passenger cars: The application of a remote sensing vehicle emission measurement system	J. Tate

Electro and Hybrid Vehicles

50	Electric vehicles environmental and energy assessment: Methodological focusing and application	M.L. Picherit et al.
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Non Road Traffic Emissions

18	Influence of the aging of tractor engines on performance, fuel consumption and exhaust emissions	M. Landis et al.
P04	Lidar observations of ship plumes in the English Channel	M. Bennett et al.

Air Quality Measurement and Modelling

45	Air pollution by fine particles (PM-10, PM-2,5 and PM-1), size distribution and associated trace metals evaluation in the great area of Algiers	R. Kerbach et al.
P21	Emission factors derived from measurements in the Gubrist road tunnel	M. Meier et al.
119	Long-term trends in Nitrogen oxides, total-NMVOCs and ozone in the Swiss Planetary Boundary Layer deduced from the NABEL-network	J. Staehelin et al.
139	Meteorological influences upon airport air quality in Zurich, Paris CDG, Athens and Mexico City	K. Schäfer et al.
73	Meteorological influences and role of emissions within the context of air quality in Beijing	K. Schäfer et al.
P06	Modeling air pollutants and greenhouse gas concentration fields using non-linear prediction chaos theory methods	A. Glushkov et al.
101	Effects of temperature and of different pollution sources on particle size distributions in Grisons (Switzerland)	J. Thudium et al.
131	Concentrations of platinum group metals from transport in the environment	V. Adamec et al.
83	Impact of land use on urban mobility and air quality in a Portuguese medium-sized city	C. Borrego et al.
P01	Influence of street canyon geometries on the dispersion of nanoparticles	A. Abdulsahab et al.
48	Continuous measurement of coarse, fine, and ultrafine particulate matter, gaseous pollutants and meteorological conditions at multiple locations in Antwerp, Belgium	V.K. Mishra et al.
58	Direct implementation of non-linear chemical reaction terms for ozone chemistry in CFD-based air quality modelling	B. De Maerschalck et al.
106	Concentrations of traffic-related air pollution along motorways and motorway viaducts: a comparative study	M. Van Poppel et al.
17	Modeling pollutant dispersion from roadway traffic using a line source Gaussian formula	R. Briant et al.
125	Can particulate matter be used to evaluate traffic related abatement measures? Conclusions of three recent case studies in the "hot spot" Flanders, Belgium	S. Janssen et al.

Secondary Pollutants and Exposure

21	Simulation of commute patterns and commute exposure to air pollution	M.S. Ragettli et al.
53	Modeling personal and indoor exposure to Nitrogen dioxide among adults in eight Swiss cities in 1993 and 2003	H.C. Phuleria et al.



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Poster Session 2

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New Technologies

26	Propene adsorption on different zeolites and silicoaluminophosphates under cold start conditions	J.M. López et al.
15	Influence of the three way catalyst design parameters on the conversions during cold start and hot engine operations	H. Santos et al.
69	Reduction of air pollution inside a vehicle by using nano-particle filter	L. Tartakovsky et al.
P02	Uncatalysed and catalysed soot combustion under NO _x +O ₂ : real diesel versus model soots	I. Atribak et al.
52	Preparation and characterization of monolithic catalyst for CNG applications	M. Adamowska et al.

Emission Modelling

137	U.S. EPA's MOVES2010 vehicle emission model: overview and	J. Koupal et al.
68	Combining multi-period vehicle retrofit and replacement decision with aggregated task assignment for emissions reduction	H. Timon et al.
132	Use of portable emissions measurement system (PEMS) for validation and development of passenger car emission factors	M. Kousoulidou et al.
65	Emission inventory mobile sources for Gauteng, South Africa - Tool for scenario calculations and input for dispersion modelling	J. Brosthaus et al.
109	Vehicle emission modelling of air toxic and greenhouse gases in Porto metropolitan area	O. Tchepel et al.
71	E-Motion: An environmental impact assessment modelling framework	M. Vanhulsel et al.
138	New Zealand's greenhouse gas transport emissions and an international	H. Wang et al.
84	Micro-Simulation of traffic fleet to predict the impact of traffic management on exhaust emissions	M. Madireddy et al.

Emission Policies

75	A monitoring system to control effects and effectiveness of traffic measures in urban areas	V. Diegmann et al.
104	Impact of an environmental zone on transport emissions in the city of Graz	M. Rexeis et al.
25	Estimating the effect of on-road vehicle emission controls on future air quality in Paris, France	Y. Roustan et al.
74	Analysis of the impacts of an environmental traffic management system on vehicle emissions and air quality	L. Neunhäuserer et al.

Biofuels

47	Biodistillate transportation fuels: Life cycle impacts	A. Broch et al.
12	GHG balance for light vehicles fuelled with different biofuel blends	D. Pillot et al.