



22nd International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes

10-13 September 2024, Pärnu, Estonia

HARMO 22 CONFERENCE PROGRAMME

Sunday, 9 June 2024 (Hestia Hotel Strand)

15:00 – 20:00	Registration (Hestia Hotel Strand)
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Monday, 10 June (Hestia Hotel Strand)

08:00 – 18:00	Registration (Hestia Hotel Strand)
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09:00 – 09:20	Welcome by the organizers, Opening (Jurmala room)
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09:20 – 10:00	DGV ENV Keynote - Christian Buens (Jurmala room)
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10:00 – 10:40	Plenary session 1 (Jurmala room) Topic 1: Approaches to model evaluation and quality assurance Chair: Silvia Trini Castelli
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10:00 – 10:20	H22-029 <u>Christina Hood</u> , James O'Neill, Rose Jackson, David Jinks, Martin Seaton, Sarah Strickland, David Carruthers: <i>Comparing the influence of input meteorological dataset and local dispersion model choice on regulatory modelling outputs</i>
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10:20 – 10:40	H22-043 Koen Siteur, Ronald Hoogerbrugge, Joost Wesseling, Cor Jacobs, Addo van Pul: <i>Uncertainty estimates of the nitrogen deposition for The Netherlands</i>
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10:40 – 11:00	Coffee/Tea Break, Poster Session
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11:00 – 12:40	Plenary session 2 (Jurmala room) Topic 1: Approaches to model evaluation and quality assurance Chair: Philippe Thunis
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11:00 – 11:20	H22-090 Marina Sterk, Eelke Kooi, Addo van Pul, Pim Meijer, Cor Jacobs, <u>Gudrún Thorkelsdottir</u> , Stijn Janssen, Wouter Lefebvre, Anne Sofie Lansø, Jenny Stocker, Martin Seaton, Bill Bealy, Audric Vigier, Maarten Krol: <i>Benchmark exercise for nitrogen dispersion and deposition modelling at local scale using operational models</i>
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11:20 – 11:40	H22-070 Andrea Solange E. Luque, <u>Andrea L. Pineda Rojas</u> , Lluís Fita, Rafael Borge: <i>Impact of boundary and initial conditions on NO_x, NO₂ and O₃ concentrations in WRF-CMAQ simulations over the Metropolitan Area of Buenos Aires, Argentina</i>
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11:40 – 12:00	H22-071 Patrick Hogan, Rowell Hagemann, Helmut Lorentz: <i>Evaluating 3d and 2d models for the development of nocturnal katabatic cold air drainage flows</i>
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12:00 – 12:20	H22-081 <u>Iveta Šteinberga</u> : <i>Practical use of the joint dispersion model and sensor measurements to assess air quality within air quality improvement programmes. Example of Liepaja city in Latvia</i>
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12:20 – 12:40	H22-091 <u>Gertie Geertsema</u> and Erik Holtslag: <i>How wind energy can help improve windshear and roughness modelling</i>
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12:40 – 14:00	Lunch in restaurant of Hestia Hotel Strand
14:00 – 15:20	Plenary session 3 (Jurmala room) Topic 1: Approaches to model evaluation and quality assurance Chair: Kees Cuvelier
14:00 – 14:20	H22-138 Marko Kaasik, Terje Tammekivi: <i>Snow sampling as a method for validating the deposition pathway in air quality models: historical overview and main recent findings in Estonia</i>
14:20 – 14:40	H22-073 Moussiopoulos N., Barmpas F., Fragkou E., Karagkounis A., Efthimiou G., Tsegas G., Binas V., Maggos Th.: <i>Assessing the Effectiveness of a Photocatalytic Paint for Depollution in a Controlled Indoor Environment</i>
14:40 – 15:00	H22-077 Vlad Isakov, Michael Breen, Saravanan Arunachalam, Catherine Seppanen: TracMyAir: <i>A Smartphone-based Model for Estimating Individual-level Air Pollution Exposure and Dose</i>
15:00 – 15:20	H22-149 Cyrill von Arx: <i>Implementation of a decision support system for nuclear emergencies</i>
15:20 – 15:50	Invited speech: Hans Orru: <i>Using modelled air quality in health studies</i>
15:50 – 16:00	Poster pitches session 1: Topics 1, 4 (Jurmala room)
16:00 – 16:20	Coffee/Tea Break, Poster Session
16:20 – 16:40	Poster pitches session 2: Topics 5, SS1, SS2 (Jurmala room)
16:20 – 18:00	Plenary session 4 (Jurmala room) SS1: Harmonisation of tools for assessing effects and impacts of energy and climate policies on air quality Chair: Nicolas Moussiopoulos
16:40 – 17:00	H22-040 Michael Russo, David Carvalho, Nelson Martins, Alexandra Monteiro: <i>High-resolution renewable resource variability data under climate change scenarios to support decarbonisation policies</i>
17:00 – 17:20	H22-086 Rafael Borge, David de la Paz, Javier Pérez, Juan Manuel de Andrés, Luis Tovar, Eva Escobar, Mariano Oliveros: <i>Is the fulfilment of proposed air quality standards in Madrid compatible with the level of ambition of current local climate goals?</i>
17:20 – 17:40	H22-094 Marielle Mulder, Maurer, C., Redl, P., Hoheisel, A., Schneider, S., Chen, J., Luther, A., Matthews, B., Watzinger, A., Meeran, K., Hirtl, M.: <i>Inverse modelling of CH4 and CO2 over Vienna, using ground-based and satellite observations</i>
17:40 – 18:00	H22-115 Christian Lejon, Daniel Vågberg, Fredrik Schönfeldt, Leif Persson, Daniel Elfverson, Oscar Björnham: <i>Retrospect Atmospheric Dispersion Simulations of the Nord Stream Methane Leaks 2022</i>
19:00 – 21:00	Ice Breaker (bar in Hestia Hotel Strand)
21:00	End of day 1

Tuesday, 11 June 2024 (Hestia Hotel Strand)

09:00 – 16:00 Registration (Hestia Hotel Strand)		
09:00 – 10:20	Parallel session 1 (Jurmala room) Topic 3: Urban Scale and Street Canyon Modelling Chair: Bertrand Carissimo	Parallel session 2 (Palanga room) Topic 6: Dispersion modelling and exposure to accidental releases Chair: Armand Albergel
09:00 – 09:20	<u>Chi Vuong Nguyen</u> , Lionel Soulhac, Perrine Charvolin, Guillaume Sabiron: <i>Assessment of urban air quality using the SIRANE dispersion model and a new method for estimating traffic emissions</i>	H22-088 Songzhi Yang, <u>Irène Korsakissok</u> , Philippe Laguionie, Perrine Charvolin-Volta: <i>Near-field (R<200m) atmospheric dispersion simulations and sensitivity analysis following a full-scale atmospheric tracer experiment</i>
09:20 – 09:40	H22-024 <u>Sofia Fellini</u> , Tianyang Li, Maarten van Reeuwijk: <i>Enhancing Urban Air Pollution Modelling Through Complex Network Approaches</i>	H22-112 <u>Oscar Björnham</u> , Stephane Burkhart, Guillaume Leroy, Thomas Vik, Thor Gjesdal, Simon Gant, Rory Hetherington, Helen Cruse, Christian Lejon, Daniel Elfverson, Jan Burman: <i>Overview of content and ongoing experimental work in the international collaboration initiative MODISAFE</i>
09:40 – 10:00	H22-121 <u>Tony Christian Landi</u> , Daiane Brondani, Silvia Trini Castelli, Luca Mortarini, Cinzia De Benedictis, Edoardo Fiorillo, Luisa Neri, Tommaso Sorgente, Francesca De Santi, Daniela Cabiddu, Michela Mortara, Michela Spagnuolo: <i>Development of a modelling chain from continental to urban scale applied over Italy</i>	H22-028 <u>Michiel de Bode</u> , A van Dijk; A Kloosterman; J. Tomas: <i>Novel Method for Radiation Dose Estimation applied to Dispersion Simulations of Nuclear Detonations</i>
10:00 – 10:20	H22-132 <u>Vladimír Fuka</u> , Štěpán Nosek, Jelena Radović: <i>Coherent structures and scalar dispersion in 3D street canyons</i>	H22-034 Allan Gouvenaux, Julien Salomon, <u>Patrick Armand</u> , Christophe Duchenne: <i>Comparison of dimension reduction and surrogate modelling methods in the field of atmospheric dispersion</i>
10:20 – 10:40	H22-134 <u>Anahita Sattari</u> , Hans Hooyberghs: <i>Validation of the ATMO-Street air quality model using a large-scale measurement data set over Warsaw, Poland</i>	H22-150 <u>Lionel Soulhac</u> , Guillevic Lamaison, Perrine Charvolin, Chi Vuong Nguyen, Patrick Aarmand: <i>Application of the BUILD operational dispersion model for accidental or deliberate releases in real complex urban and industrial area</i>
10:40 – 11:00 Coffee/Tea Break, Poster Session		

11:00 – 12:20	Parallel session 3 (Jurmala room) Topic 3: Urban Scale and Street Canyon Modelling Chair: Saravanan Arunachalam	Parallel session 4 (Palanga room) Topic 6: Dispersion modelling and exposure to accidental releases Chair: Marko Kaasik
11:00 – 11:20	H22-049 <u>Soo-jin Park</u> , Lya Lugon, Youngseob Kim, Alexia Baudic, Ludovico Di Antonio, Claudia Di Biagio, Fabrice Dugay, Olivier Favez, Véronique Gherzi, Aline Gratien, Alice Maison, Jean-Eudes Petit, Amandine Rosso, Myrto Valari, Jérémy Vigneron, Olivier Sanchez, And Karine Sartelet: <i>Modelling pollutant concentrations over Paris city with the high-resolution traffic emissions using CHIMERE/MUNICH</i>	H22-002 <u>Hiromasa Nakayama</u> , Takaaki Kono <i>Study on flow and turbulence characteristics measured by an on-site meteorological station at a nuclear facility for a real-time atmospheric dispersion simulation</i>
11:20 – 11:40	H22-084 <u>Maxime Nibart</u> , Ilan Levy, Uri Stein, Osnat Yossef, Ines Makni, Alex Resovsky & Fanny Velay-Lasry: <i>Improving Air Quality modelling forecast system at Tel Aviv using multi-scale approaches</i>	H22-089 <u>Erwan Rondeaux</u> : <i>Numerical assessment of the applicability of Gaussian models for the prediction of near-field dispersion near urban environments</i>
11:40 – 12:00	H22-085 <u>Esther Rivas</u> , A. Martilli, J.L. Santiago, F. Meier, B. Sánchez, F. Martín: <i>Impact of cool roofs on thermal comfort and air quality at street level during a heat wave episode in Madrid</i>	H22-082 Andy Delcloo and Pieter De Meutter: <i>Using high AROME high resolution NWP data in an operational context for the long range in the framework of emergency planning</i>
12:00 – 12:30	H22-099 Tereza Pikousová, Kryštof Eben, Martin Glew, Ondřej Vlček: <i>Calculation of annual statistics of air quality from a restricted number of simulations</i>	T6 H22-057 Karsten Spieker, Cornelia Richter, Robert Hanfland: <i>Spatially and temporally high-resolution quantitative precipitation data and coupling of wind field models within the Atmospheric Radionuclide Transport Model ARTM</i>

12:20 – 12:40	Poster pitches session 3: Topics 9, 6 and 3 (Jurmala room)
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12:14 – 14:00	Lunch in restaurant of Hestia Hotel Strand
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14:00 – 15:40	Plenary session 5 (Jurmala room) Topic 3: Urban Scale and Street Canyon Modelling Chair: Patrick Armand
14:00 – 14:20	H22-036 <u>Hans Hooyberghs</u> , Matthias Ketzler, Jibrán Khan, Charlotte Vanpoucke, Wouter Lefebvre: <i>Detailed validation of the OSPM street-canyon box model</i>
14:20 – 14:40	H22-105 <u>Jose-Luis Santiago</u> , Beatriz Sanchez, Esther Rivas, Riccardo Buccolieri, Alberto Martilli, Fernando Martín: <i>Hourly NOx concentrations across a whole real city during a winter day: unsteady vs steady CFD modelling</i>
14:40 – 15:00	H22-080 <u>Fernando Martin</u> , V. Rodrigues, S. Janssen, J.L. Santiago, J. Sousa, E. Rivas, J. Stocker, R. Jackson, F. Russo, M.G. Villani, G. Tinarelli, D. Barbero, R. San José, J.L. Pérez-Camanyo, G. Sousa-Santos, J. Bartzis, I. Sakellaris, Z. Horváth, L. Környei, B. Liszkai, Á. Kovács, X. Jurado, N. Reiminger, Nicola Masey, Scott Hamilton, P. Thunis, C. Cuvelier: <i>FAIRMODE WG4 Intercomparison Exercise of Urban Microscale Models: Spatial Representativeness and Limit Value Exceedances Areas.</i>

15:00 – 15:20	H22-144 <u>Matthias Ketzel</u> , Christopher Andersen, Jibrán Kha, Steen Solvang Jensen: <i>Extending the application range of the parameterised street canyon model OSPM</i>
15:20 – 15:40	H22-044 <u>Koen Siteur</u> , Ronald Hoogerbrugge, Joost Wesseling, Gulliver de Boer, Abe Vos: <i>High resolution urban concentration maps derived through model harmonization and inverse modelling</i>

15:40 – 16:00	Poster pitches session 4: Topic 3 (Jurmala room)
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16:20 – 18:00	Plenary session 6 (Jurmala room) Topic 3: Urban Scale and Street Canyon Modelling Chair: Fernando Martin
16:20 – 16:40	H22-098 <u>William R. Patino</u> , Petra Bauerová, Josef Keder, Adriana Šindelářová, Ondřej Vlček, Tereza Pikousová, Martin Bureš, Kryštof Eben, Jan Geletič, Pavel Krč, Jelena Radović, Jaroslav Resler, Hynek Řezníček, Radek Jareš, Jan Karel: <i>Validation and comparison of different dispersion modelling approaches in the surroundings of Legerova street canyon in the city of Prague</i>
16:40 – 17:00	H22-015 <u>Hector Amino</u> , Cédric Flageul, Bertrand Carissimo, Martin Ferrand: <i>CFD study of PM10 dispersion in a sports stadium using a mesh based on geometry obtained from a 3-D cloud of laser points</i>
17:00 – 17:20	H22-009 <u>Christopher Andersen</u> , Matthias Ketzel, Ole Hertel, Jesper H. Christensen, Jørgen Brandt: The DANish Lagrangian Model (DALM): <i>High-Resolution Long-Term Air Pollution Modeling in Denmark</i>
17:20 – 17:40	H22-104 <u>Jose-Luis Santiago</u> , Beatriz Sanchez, Esther Rivas, Marta G. Vivanco, Mark R. Theobald, Victoria Gil, Alejandro Rodríguez-Sánchez, Juan Luis Garrido, Coralina Hernández, Alberto Martilli, Fernando Martín: <i>How to use Computational Fluid Dynamics modelling for air quality forecast at high spatial resolution</i>
17:40 – 18:00	H22-110 <u>Anne Sofie Lansø</u> , Morten Winther, Steen Solvang Jensen: <i>Increasing cruise ship activity in Copenhagen port impacts air quality levels above the surface</i>

19:00 – 21:00	Guided city tour
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21:00	End of Day 2
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09:00 – 16:00	Registration (Hestia Hotel Strand)
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09:00 – 10:20	Plenary session 7 (Jurmala room) Topic 2: Regional / long-range scale modelling Chair: Clemens Mensink
09:00 – 09:20	H22-032 <u>Roberto San Jose</u> and Juan L. Pere-Camanyo: <i>Assessing future Greenhouse Gas Concentrations in Madrid, Spain: A dynamical downscaling approach using WRF-VPRM</i>
09:20 – 09:40	H22-097 Alexandra Monteiro, <u>Michael Russo</u> , Enrico Dammers, André Barreirinha, Martijn Schaap: <i>First assessment of nitrogen deposition in Portugal using LOTOS-EUROS: which meteorological driver is the most adequate?</i>
09:40 – 10:00	H22-108 <u>Grzegorz Jeleniewicz</u> , Karol Szymankiewicz, Joanna Struzewska, Ainur Nagmarova, Aleksander Norowski: <i>Spatial relocation of emissions data as an effective method to reduce modelling uncertainty</i>
10:00 – 10:20	H22-037 <u>Matteo Maria Musso</u> , Silvia Ferrarese, Silvia Trini Castelli: <i>Investigation of microplastics long range transport with the Lagrangian dispersion model MILORD</i>
10:20 – 10:40	H22-137 <u>Tomáš Halenka</u> , Ranjeet Sokhi: <i>Non-CO2 Forcers and Their Climate, Weather, Air Quality and Health Impacts – Project FOCI</i>

10:40 – 11:00	Coffee/Tea Break, Poster Session
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11:00 – 12:20	Parallel session 5 (Jurmala room) Topic 2: Regional / long-range scale modelling Chair: Roberto San Jose	Parallel session 6 (Palanga room) SS2: Can machine learning approaches be harmonised with dispersion modelling? Chair: Marko Kaasik
11:00 – 11:20	H22-007 <u>Kevin Oliveira</u> , Marc Guevara, Oriol Jorba, Hervé Petetin, Dene Bowdalo, Carles Tena, Gilbert Pinto, Franco López, and Carlos Pérez García-Pando: <i>An assessment and modelling of aromatic VOCs in Spain using the MONARCH system</i>	H22-005 <u>Ameir Shaa</u> , Xiasu Yang, Zhe Wang, Boyuan Liu, Xiao Wei, Bruno Ribstein, Maxime Nibart, Armand Albergel, and Claude Guet: <i>Can Physics Informed Deep Learning (PINN) be used to predict Urban Wind Field?</i>
11:20 – 11:40	H22-052 <u>Andrés Simón-Moral</u> , Andoni Aranguren Ubierna, María Arostegui Perez, Sergio Gil Lopez, José Germán Fernandez Rodrigo, Ales Padró Hernandez: <i>Mesoscale simulations of fugitive PM10 emission from harbour activities in complex terrain</i>	H22-008 <u>Feng Zhijing</u> , Peng Cheng Wang, Kin Jon Benjamin Tan, Koh Wai Heng, Tay Bee Kiat, and Elisa Y.M. Ang: <i>Physics Informed Neural Networks (PINNs) for rapid contamination dispersion predictions</i>
11:40 – 12:00	H22-093 <u>Anastasia Poupkou</u> , Natalia Liora, Serafim Kontos, Stavros Solomos, Ioannis Kapsomenakis, Georgios Grivas, Vasiliki Assimakopoulos, Kyriaki-Maria Farneli, Athena Progiou, Pavlos Kalabokas, Nikolaos Mihalopoulos, Dimitrios Melas and Christos Zerefos: <i>Exploring the impact of shipping emissions on PM levels in the Eastern Mediterranean</i>	H22-068 <u>Mouhcine Mendil</u> , Paul Novello, Christophe Duchenne, Sylvain Leirens, Patrick Armand: <i>Enhanced Deep Learning Architecture for 3D Air Pollution Dispersion Forecasting</i>

12:00 – 12:20	H22-114 <u>Dušan Štefánik</u> , Tereza Šedivá, Jana Krajčovičová, Juraj Beňo, Jana Matejovičová: <i>Operational air quality forecast for central Europe</i>	H22-153 Elisabetta Angelino, <u>Alessandro Marongiu</u> , Anna Gilia Collalto, Gabriele Distefano: <i>Application of machine learning approaches for high resolution emission inventory and temporal emission profiles</i>
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12:20 -12:40	Poster pitches session 5: Topics 2, 7 and 8 (Jurmala room)	
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12:40 – 14:00	Lunch in restaurant of Hestia Hotel Strand	
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14:00 – 16:00	Parallel session 7 (Jurmala room) Topic 7: Air pollution management and decision support systems Chair: Vlad Isakov	Parallel session 8 (Palanga room) Topic 8: Support to EU legislation on air quality modelling Chair: Peter Suppan
14:00 – 14:20	H22-012 Victor Watson, François Septier, <u>Patrick Armand</u> and Christophe Duchenne: <i>An efficient family of methods for air pollutant detection at very low signal to noise ratio</i>	H22-048 <u>Philippe Thunis</u> , Enrico Pisoni, Stefano Zauli Sajani, Fabio Monforti-Ferrario, Bertrand Bessagnet, Elisabetta Vignati, Alexander De Meij: <i>Air Quality in European Cities: The urban PM2.5 Atlas</i>
14:20 – 14:40	H22-020 <u>Niko Karvosenoja</u> , Ismo Entsalo, Santtu Karhinen, Janne Pesu, Ari Nissinen: <i>Tools to support city level climate planning – current status and future needs for impact assessment</i>	H22-051 Marta G. Vivanco, J.L. Garrido, V. Gil, <u>M. R. Theobald</u> , C. Hernández: <i>Impacts of the 2nd National Air Pollution Control Programme on air quality in Spain and the sensitivity of the results to the chemistry transport model version, driving meteorology and chemical mechanism</i>
14:40 – 15:00	H22-022 <u>Sirma Stenzel</u> , Alexander Hieden, Kathrin Baumann-Stanzer: <i>B.Prepared : Emergency planning and decision support system in Austria for managing accidents involving hazardous substances</i>	H22-058 <u>Kees Cuvelier</u> , Philippe Thunis, Alexander de Meij, Enrico Pisoni: <i>Validation of CAMS Air Quality Forecasts using the harmonized FAIRMODE methodology (F_MQO)</i>
15:00 – 15:20	H22-031 <u>Anita Tóth</u> , Krisztina Kövesi-Lázár: <i>The adaptation of the ATMO-Plan air quality planning application in Hungary</i>	H22-151 <u>Krisztina Horváth</u> , Zita Ferenczi, Adrienn Varga-Balogh, Ádám Leelőssy, Róbert Mészáros: <i>One-year comparison of regional air quality models with measurements of atmospheric gases and aerosol particles in Hungary</i>
15:20 – 15:40	H22-045 <u>Fabio Monforti-Ferrario</u> , Luana Valentini, Marta Giulia Baldi, Enrico Pisoni: <i>Addressing air quality co-benefits of planned mitigation actions in the frame of the Covenant of Mayors initiative</i>	H22-140 <u>Pawel Durka</u> , Jacek W. Kaminski, Joanna Struzewska, Aleksander Norowski: <i>Air quality forecasts evaluation methodology proposed by FAIRMODE - an opportunity for standardization – analysis and case study</i>
15:40 – 16:00	H22-095 Daphné Ladet, Yelva Roustan, Olivier Duclaux, Stéphane Jouenne: <i>Modeling amines and degradation products in the Plume of Asset with Carbon Capture Technology</i>	H22-016 Alexander de Meij, Kees Cuvelier, <u>Philippe Thunis</u> , and Enrico Pisoni: <i>Evaluating 'CAMS re-analysis' using FAIRMODE benchmarking indicators</i>

16:00 – 16:20	Coffee/Tea Break, Poster Session	
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16:20 – 18:00	Plenary session 8 (Jurmala room) Topic 7: Air pollution management and decision support systems Chair: Matthias Ketzel
16:20 – 16:40	H22-096 <u>Chiara Metrangolo</u> , Adelaide Dinoi, Antonio Esposito, Gianluca Pappaccogli, Antonio Donateo, Riccardo Buccolieri: <i>Harmonizing Urban Air Quality: Integrating Experimental Data and Modelling for Effective Pollution Mitigation</i>
16:40 – 17:00	H22-143 <u>Saravanan Arunachalam</u> , Catherine Seppanen, Brian Naess, Bin Cheng, David Cooley, Sarah Johnson, Kazuhiko Ito: <i>Tract-level Air Pollution Policy and Assessment (TRAPPA) Tool to Assess Health Benefits of Transportation and Energy Efficiency Measures in New York City</i>
17:00 – 17:20	H22-120 Gianni Luigi Tinarelli, Francesca Barnaba, Gian Paolo Gobbi, Cristina Pozzi, Paola Radice, <u>Silvia Trini Castelli</u> : <i>High-resolution modelling and observations of present and foreseen scenarios in the city-port of Civitavecchia (Italy)</i>
17:20 – 17:40	H22-135 Tobias Osswald, <u>Diogo Lopes</u> , Diogo Baptista, Carla Gama, Isilda Menezes, Carlos Viegas, Luís Mário, Domingos Xavier Viegas, Ana Isabel Miranda: <i>Modelling smoke dispersion from prescribed fires</i>
17:40 – 18:00	H22-139 <u>Raido Kiss</u> , Marko Kaasik, Lars Örtengren, Pär Ivarsson, Rostislav Kouznetsov, Erik Teinmaa: <i>Application of SILAM model on Airviro platform</i>
18:00	End of Day 3
18:45	Buses leave from Hestia Hotel Strand for dinner
20:00	Conference Dinner (Jaanihanso Cider House)

Thursday, 13 June 2024 (Hestia Hotel Strand)

09:30 – 10:00	Plenary session 9 (Jurmala room) – Invited Speeches Chair: John Bartzis
09:00 – 09:30	Invited speech: Philippe Thunis: Updates on FAIRMODE
09:30 – 10:00	Invited speech: Anette Iital (Estonian Environmental Research Centre): <i>Climate adaptation project Regions4Climate and urban climate measurements in Pärnu.</i>

10:00 – 10:40	Poster session
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10:40 – 11:00	Coffee/Tea Break, Poster Session
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11:00 – 12:40	Parallel session 9 (Jurmala room) Topic 5: Inverse modelling, source identification and apportionment Chair: Ignacio Pizzo	Parallel session 10 (Palanga room) Topic 9: Theoretical studies on atmospheric processes for dispersion Chair: Lionel Soulhac
11:00 – 11:20	H22-125 Victor David; Elisa Allegrini; <u>Maxime Nibart</u> ; Marine Laplanche: <i>Flux estimation using reverse modelling and mobile onsite measurements</i>	H22-011 P. Armand, C. Duchenne, B. Ribstein, X. Yang, V. David, M. Nibart and A. Albergel: <i>Proposals for improving the multi-scale consideration of turbulence in the PMSS modelling system</i>
11:20 – 11:40	H22-013 <u>John Bartzis</u> , Ioannis A. Sakellaris, Spyros Andronopoulos, Alexandros Venetsanos: <i>On novel simplified methodologies to estimate source term and uncertainty in airborne releases</i>	H22-030 <u>Hanane Bounouas</u> , Olivier Connan, Didier Hebert, Philippe Laguionie, Pierre Rounsard, Eric Dupont, Yannick Lefranc, Aurélien Fauchoux, Yelva Roustan: <i>Experimental Study and Modeling of the Meandering effect on plume dispersion under low wind conditions in an urban environment</i>
11:40 – 12:00	H22-050 <u>Mark R. Theobald</u> , M.G. Vivanco, V. Gil, J.L. Garrido, C. Hernández: <i>Source apportionment using the brute force method to quantify sector contributions to air pollution episodes in Spain</i>	H22-109 <u>Daiane Brondani</u> , Raissa Soares de Oliveira, Cleo Q. Dias Junior, Silvia Trini Castelli, Tony Christian Landi, Umberto Giostra, Luca Mortarini: <i>Assessing the effect of topography on the Atmospheric Flow over the Amazon Forest by means of Large Eddy Simulation and tower measurements</i>
12:00 – 12:20	H22-060 <u>Stijn Van Leuven</u> , Pieter De Meutter, Johan Camps, Piet Termonia and Andy Delcloo: <i>Source reconstruction based on inverse atmospheric transport modelling with deposition measurements</i>	H22-025 <u>Benjamin Drummond</u> and Ailish Graham: <i>Modelling wildfire pollution with an Eulerian and Lagrangian dispersion model</i>

12:20 – 12:40	H22-062 <u>Giorgio Veratti</u> , Alessandro Bigi, Michele Stortini, Sergio Teggi and Grazia Ghermandi: <i>Identifying black carbon sources and concentrations in an urban hotspot of the central Po valley for targeted mitigation strategies using high-resolution dispersion modelling and micro-aethalometers</i>	H22-145 Andrew Mirza, <u>Helen Dacre</u> , Brian Lo: <i>A case study analysis of the impact of a new free tropospheric turbulence scheme on the dispersion of an atmospheric tracer</i>
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12:40 – 14:00	Lunch in restaurant of Hestia Hotel Strand	
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14:00 – 16:00	Parallel session 11 (Jurmala room) Topic 5: Inverse modelling, source identification and apportionment Chair: Silvia Trini Castelli	Parallel session 12 (Palanga room) Topic 9: Theoretical studies on atmospheric processes for dispersion Chair: Helen Dacre
14:00 – 14:20	H22-065 <u>Jean Salles Loustau</u> , Lionel Soulhac, Ariane Emmanuelli, Olivier Duclaux, Rami Nammour, Chi-Vuong Nguyen, Ludovic Donnat and Catherine Juery: <i>Inverse modelling for source characterization in complex industrial sites: Development of the adjoint state method applied to a Lagrangian stochastic dispersion model</i>	H22-061 <u>Bianca Tenti</u> , Enrico Ferrero, Stefano Alessandrini: <i>Plume rise model for merging plumes in a Lagrangian Stochastic model</i>
14:20 – 14:40	H22-066 <u>Pieter de Meutter</u> , A. Delcloo, I. Hoffman: <i>A baseline for source localisation using the inverse modelling tool FREAR</i>	H22-074 <u>Dana Lüdemann</u> , Ebba Dellwik, Niels Troldborg, Jan Pehrsson, Nikolas Angelou: <i>Refining Urban Wind and Pollutant Dispersion Modelling: From Raw Lidar Data to CFD Models</i>
14:40 – 15:00	H22-075 <u>Jens Peter Frankemölle</u> , Johan Camps, Pieter De Meutter & Johan Meyers: <i>Near-range source term estimation and uncertainty quantification informed by an early warning network around a nuclear facility</i>	H22-056 Martin Ferrand, <u>Guilhem Balvet</u> , Yelva Roustan: <i>A methodology to derive Monin-Obukhov universal functions consistent with second order turbulence models</i>
15:00 – 15:20	H22-003 <u>Xiasu Yang</u> , Aditya Anand, Claude Derognat, Bruno Ribstein: <i>Data fusion for air quality mapping using observations and 3D Lagrangian modelling of industrial plumes</i>	H22-133 Vibha Selvaratnam: <i>A scale-aware method for parameterizing dispersion by unresolved mesoscale motions in the atmosphere</i>
15:20 – 15:40	H22-129 <u>Elisa Specchia</u> , Cristina Pozzi, Gianni Tinarelli: <i>Combination of counts and modelling for estimating aircraft ultrafine particle emissions at Treviso airport</i>	H22-038 <u>Benoît Cuilhé</u> , Martin Ferrand, Yelva Roustan, Bertrand Carissimo: <i>Precomputed wind field database for fast atmospheric dispersion calculation: modelling of low frequency effects with triple decomposition</i>

15:40 – 16:00	H22-130 <u>Ignacio Pisso</u> , Stephen Platt, Norbert Schmidbauer, Sabine Eckhardt, Nikolaos Evangeliou, Rona Thompson, Massimo Cassiani: <i>Quantifying CH₄ leaks from the Nordstream pipelines using ICOS data and the FLEXPART Lagrangian particle dispersion model</i>	H22-146 <u>Lionel Soulhac</u> , Guillevic Lamaison, Perrine Charvolin, Chi Vuong Nguyen, Patrick Armand: <i>A new operational micromixing approach to model concentration fluctuations</i>
16:00 – 16:30	Closing and Goodbye Coffee/Tea break	
16.30	End of Day 4	



**22nd International Conference on Harmonisation
within Atmospheric Dispersion Modelling for
Regulatory Purposes 10-13 September 2024, Pärnu,
Estonia**

POSTER PITCHES! 2-minutes presentation

Monday, June 10 15:50 – 16:00	Poster pitches session 1: Topics 1, 4 (Jurmala room)
<p>T1 H22-033 <u>Luc Favre, Martin Ferrand</u>: <i>Development and validation of a CFD model for evaporation and heat transfer in humid air flows inside Wet Cooling Towers</i></p>	
<p>T1 H22-076 <u>Andrea L. Pineda Rojas</u>, Emilio Kropff: <i>Analysing conditions leading to high NO2 concentrations simulated with the DAUMOD-GRS model in a context of scarce monitoring data</i></p>	
<p>T4 H22-107 <u>Eleonora Racca</u>, Paolo Gambino: <i>Mapping of gradients of indoor thermohygrometric and air quality quantities through a multi-sensors observational campaign</i></p>	
<p>T4 H22-155 <u>Marzio Invernizzi</u>, Francesca Tagliaferri, Anel Hernández-Garcés, Selena Sironi: <i>Prognostic vs measured met data for odour dispersion modelling: a dual-site case study</i></p>	
Monday, June 10 16:20 – 16:40	Poster pitches session 2: Topics 5, SS1, SS2 (Jurmala room)
<p>T5 H22-054 <u>Timothé DEPELCHIN</u>, Elisa ALLEGRINI, Pramod KUMAR, Olivier LAURENT, Grégoire BROQUET, Mathis LOZANO, Adil SHAH, Philippe CIAIS: <i>Local scale atmospheric measurement and inverse modelling framework: application in greenhouse gas emission for wastewater treatment plant sector</i></p>	
<p>T5 H22-079 <u>Peter De Meutter</u>, I Hoffman and K Ungar: <i>Inverse atmospheric transport modelling using the open-source FREAR tool</i></p>	
<p>T5 H22-087 <u>Mathis LOZANO</u>, Timothé DEPELCHIN, Pramod KUMAR, Elisa ALLEGRINI, Adil SHAH, Grégoire BROQUET, Olivier LAURENT, Philippe CIAIS: <i>Methane flux estimation from landfill with Gaussian modelling approach at a local scale: Comparison and validation of measurement methods</i></p>	
<p>T5 H22-103 <u>Tess Ysebaert</u>, Hans Hooyberghs, Gert Geentjens, Jana Pauwels, Stijn Vranckx: <i>Mapping the impact and contribution of airport activities on local air quality</i></p>	
<p>T5 H22-118 <u>H. Lorentz, R. Irsig, Patrick Hogan</u>: <i>Long-range monitoring of ship emissions</i></p>	
<p>SS1 H22-111 <u>Pier Giuseppe LEDDA</u>, Maria Grazia BADAS, Giorgio QUERZOLI: <i>Microclimate impact of renewable energy integration: a numerical study of atmospheric flow around models of agrivoltaic farms</i></p>	
<p>SS2 H22-021 <u>Armand de Villeroché</u>, Rem-Sophia Mouradi, Vincent Le Guen, Patrick Massin, Alban Farchi, Marc Bocquet, Patrick Armand: <i>Neural network surrogates for atmospheric dispersion in built area</i></p>	

Tuesday, June 11 12:20 – 12:40	Poster pitches session 3: Topics 9, 6 and 3 (Jurmala room)
T9 H22-025 <u>Benjamin Drummond</u> and Ailish Graham: <i>Modelling wildfire pollution with an Eulerian and Lagrangian dispersion model</i>	
T9 H22-041 <u>Antoine Mathieu</u> , Martin Ferrand, Romain Pennel, Eric Dupont, Rem-Sophia Mouradi: <i>Universal functions reproducing Eckman spiral and Monin-Obukhov surface layer for stable atmospheric conditions</i>	
T9 H22-069 <u>Karine Klippel</u> , Elisa Valentim Goulart, Torsten Auerswald, Neyval Costa Reis Junior, Omduth Coceal: <i>Characterization of concentration fluctuations of a passive scalar over an urban-like rectangular array</i>	
T9 H22-136 <u>Ignacio Pisso</u> , Massimo Cassiani, Anna Solvejg Dinger, Hamidreza Ardeshiri, Soon-Young Park, Kerstin Stebel, Arve Kylling, Norbert Schmidbauer and Andreas Stohl: <i>Tomographic 3D reconstructions of artificial releases of SO2 in the atmospheric boundary layer</i>	
T6 H22-023 <u>Elena Yegorova</u> , Daniel Clayton, Keith Compton, Amy Sharp: <i>Use of National Centers for Environmental Prediction Reanalysis Data to Support Severe Accident Consequence Analysis at Locations without Onsite Meteorological Data</i>	
T6 H22-057 Karsten Spieker, Cornelia Richter, Robert Hanfland: <i>Spatially and temporally high-resolution quantitative precipitation data and coupling of wind field models within the Atmospheric Radionuclide Transport Model ARTM</i>	
T6 H22-067 <u>Gang Jiang</u> , Weikun Ding, Gang Chen: <i>The Application Of Calpuff Model For Simulation On Atmospheric Dispersion Of The Postulated Severe Accident Source Term In Nuclear Power Station</i>	
T6 H22-157 <u>Sheldon Ho</u> , Yifei Ma, Yeow Chien Tan: <i>Experimental setup for Controlled Chemical Dispersion for Validation of Scaled-Down Chemical Plume Mitigation Measure</i>	
T3 H22-142 <u>M.G. Badas</u> , N. Manconi, G. Querzoli: <i>On the morphometric characterization of Italian towns</i>	
T3 H22-148 <u>José Luis Santiago</u> , Ana R. Gamarra, Beatriz Sanchez, Esther Rivas, Marta G. Vivanco, Victoria Gil, Mark. R. Theobald, Coralina Hernández, Juan Luis Garrido, Yolanda Lechón, Alejandro Rodríguez-Sánchez, Fernando Martín, Alberto Martilli: <i>Impacts of the substitution of conventional passenger cars by electric vehicles on NO2 concentrations at street scale in Spanish urban areas</i>	
T3 H22-156 Sheldon Ho, Yifei Ma, <u>Yeow Chien Tan</u> : <i>Usage of Dispersion modelling for Impact-Driven Sensors Placement</i>	

Tuesday, June 11 15:40 – 16:00	Poster pitches session 4: Topic 3 (Jurmala room)
T3 H22-117 <u>Maxence Lab</u> , Yelva Roustan, Sonia Oppo, Alexandre ARMENGAUD, Lise Le Berre, Brice Temime-Roussel, Stéphane Sauvage, Henri Wortham: <i>Comparison between 3D lagrangian model PMSS and plume-in-grid approach coupling for air quality in the bay of Marseille</i>	
T3 H22-127 Diogo Nascimento, Ana Ascenso, Ana Miranda, Myriam Lopes, <u>Vera Rodrigues</u> : <i>CFD modelling of the urban microclimate: A Portuguese Case Study: CFD modelling of the urban microclimate: A Portuguese Case Study</i>	
T3 H22-006 <u>Daniel Elfverson</u> : <i>Seamless Workflow for Lagrangian Obstacle-Resolving Dispersion Modeling: Bridging Topographical data to Simulations</i>	
T3 H22-046 <u>Suyang Lou</u> , Martin FERRAND, Yannick LEFRANC, Aurélien FAUCHEUX, Riccardo MILANI, Caroline COHEN: <i>Implementation of numerical CFD simulations at Invalides for archery competitions</i>	
T3 H22-059 <u>Margret Velizarova</u> , Reneta Dimitrova, Angel Burov, Danail Brezov, Elena Hristova, Orlin Gueorguiev: <i>Evaluation of the non-exhaust emission factors from the road transport in Sofia, Bulgaria</i>	
T3 H22-083 <u>Esther Rivas</u> , J.L. Santiago, F. Martín, A. Martilli, B. Sánchez, E. Díaz-Ramiro, F. J. Gómez-Moreno, E. Alonso-Blanco, B. Artíñano, C. Román-Cascón, C. Yagüe, D. de la Paz, R. Borge: <i>NOX infiltration modelling into a room of a real building in Madrid</i>	
T3 H22-092 <u>Esposito Antonio</u> , Pappacogli Gianluca, Zonato Andrea, Alberto Martilli, Buccolieri Riccardo, Piero Lionello: <i>Assessing Urban Geometry's Influence on Air Quality in Italian Cities: A BEP+BEM Column Modeling Approach</i>	
T3 H22-101 <u>Elsa Aristodemou</u> , Saurav Goel and Prashant Kumar: <i>Modelling the effect of hedges on tracer dispersion in shallow street canyons</i>	

T3 H22-113 <u>Beatriz Sanchez, Jose-Luis Santiago</u> , Esther Rivas, Alberto Martilli, and Fernando Martín: <i>Influence of realistic urban heating and NO_x-O₃ photochemistry on NO₂ dispersion at the city scale using CFD modelling</i>
T3 H22-116 <u>Alejandro Rodríguez-Sánchez</u> , Jose-Luis Santiago, Marta G. Vivanco, Esther Rivas, Beatriz Sanchez, Alberto Martilli, Fernando Martín, Mark R. Theobald, Victoria Gil, Juan Luis Garrido, Coralina Hernández: <i>Modelling the impacts of several traffic measures on NO_x concentrations in a real hot-spot</i>

Wednesday, June 12 12:20 -12:40	Poster pitches session 5: Topics 2, 7 and 8 (Jurmala room)
T2 H22-004 <u>Boris Mifka</u> , Maja Telišman Prtenjak, Josipa Kuzmić, Sarah Mateša, Irena Ciglencčki, Milan Čanković: <i>Application of the Reanalysis Data to Assess the Climatology of Desert Dust Deposition in the Adriatic Sea and Response of the Marine Biological System</i>	
T2 H22-035 <u>Vladimir Ivanov</u> , Ivelina Georgieva: <i>Impact of different process on the air pollution over the Balkan Peninsula</i>	
T2 H22-042 <u>Bianca Tenti</u> , Benjamin Drummond: <i>The effect of aerosol from biomass burning on meteorology and air quality over the UK</i>	
T2 H22-053 <u>Aare Luts</u> , Marko Vana, Urmas Hõrrak, Kaupo Komsaare, Heikki Junninen: <i>Comparison of growth rate calculation methods for atmospheric ultrafine particle formation models</i>	
T2 H22-100 <u>Nina Benešová</u> , Michal Belda, Jaroslav Resler, Peter Huszár, Ondřej Vlček, Pavel Krč, Jan Karlický, Pavel Juruš, Kryštof Eben: <i>FUME 2.0 - Flexible Universal processor for Modeling Emissions</i>	
T2 H22-122 <u>Silvia Ferrarese</u> , F. Apadula, M. Gallarate, A. Lanza, M. Martina, M. Musso, S. Trini Castelli: <i>Dispersion modelling of rare extreme CO₂ concentration events detected at Alpine sites</i>	
T7 H22-147 <u>Marta G. Vivanco</u> , Ana R. Gamarra, Victoria. Gil, Mark. R. Theobald, Coralina Hernández, Juan Luis Garrido, Yolanda Lechón: <i>Air quality and health impacts of selected multi-sector measures to improve air quality in Spain</i>	
T8 H22-014 <u>Krisztina Labancz</u> , László Bozó, Gábor Kis-Kovács: <i>Evaluation of Long-term Temporal Variations in Hungarian PM₁₀ and PM_{2.5} Emissions Based on National Inventories Applied for Air Quality Management</i>	
T8 H22-152 <u>Elisabetta Angelino</u> , Michele Stortini, Roberta Amorati, Stefano Bande, Giovanni Bonafè, Giuseppe Fossati, <u>Alessandro Marongiu</u> , Loris Colombo, Giulia Malvestiti, Alberto Dalla Fontana, Barbara Intini, Silvia Pillon: <i>Application of air quality models in the Po valley. Results from the PREPAIR project</i>	