

The Joint 3rd Street-in-Grid and Urban Air Quality Modeling Symposium and the 4th Street-in-Grid Model Training Workshop

Champs-sur-Marne, France

March 6 – 10, 2023

Agenda

**Days 1-3: The 4th Street-in-Grid Model Training Workshop, Ecole des Ponts ParisTech,
Room V313, 12 Boulevard Copernic - 77420 Champs-sur-Marne, France**

Program

Day 1 (Monday, March 6)

09:30 – 10:00 Introduction to air quality modeling (Yelva Roustan)

10:00 – 11:00 Mobility models to estimate traffic emissions (Nicolas Coulombel)

11:00 – 11:15 Coffee break

11:15 – 12:15 Health impact and Exposure (Rafael Borge, Virtual)

12:15 – 13:45 Lunch break (Campus cafeteria)

13:45 – 14:15 Eulerian regional CTM : needs for data (Youngseob Kim)

14:15 – 15:00 example of Polair3D preprocessing (Youngseob Kim)

15:00 – 15:15 Coffee break

15:15 – 15:45 Eulerian regional CTM : numerical integration (Youngseob Kim)

15:45 – 17:00 example of Polair3D – processing (Youngseob Kim)

Day 2 (Tuesday, March 7)

09:30 – 10:00 Polair3D – Postprocessing (Yelva Roustan)

10:00 – 10:30 Local models (Yelva Roustan)

10:30 – 10:40 Coffee break

10:40 – 11:10 Updates and Introduction to MUNICH (Lya Lugon)

11:10 – 12:00 MUNICH – Preprocessing (Lya Lugon)

12:00 – 13:30 Lunch break (Campus cafeteria)

13:30 – 14:00 MUNICH – Preprocessing (Lya Lugon)

14:00 – 15:00 MUNICH – Processing (Lya Lugon)

15:00 – 15:15 Coffee break

15:15 – 17:00 MUNICH – Processing (Lya Lugon)

Day 3 (Wednesday, March 8)

09:30 – 10:30 MUNICH – Postprocessing and introduction to the web-based application (Lya Lugon)

10:30 – 10:40 Coffee break

10:40 – 11:10 Updates and Introduction to Street-in-Grid (Youngseob Kim)

11:10 – 12:00 Street-in-Grid – Preprocessing / Processing (Youngseob Kim)

12:00 – 13:30 Lunch break (Campus cafeteria)

13:30 – 15:00 Street-in-Grid – Postprocessing (Youngseob Kim)

15:00 – 15:20 Coffee break

15:20 – 17:00 **SinG Developer and User Meeting (with Yang Zhang, Yelva Roustan, Karine Sartelet, Youngseob Kim, Lya Lugon) and Closing**

Day 4 (Thursday, March 9), 3rd Street-in-Grid and Urban Air Quality Modeling Symposium, Room P315, Ecole des Ponts ParisTech, 12 Boulevard Copernic - 77420 Champs-sur-Marne, France

Time	Activities
8:30-9:00 am	Registration and A/V Upload for Oral Presenters Introduction and Welcome
9:00-9:30 am	Photo-taking Jérôme Lesueur, Director of Research of ENPC Yang Zhang, Professor and Distinguished Fellow, Northeastern University/WMO GAFIS, Alexander Baklanov, Professor and Scientific Officer, WMO
Session 1	Around Local Scale Air Quality Modeling (Co-Chairs: Karine Sartelet and Yang Zhang)
9:30-10:00 am	Keynote Speech Karine Sartelet, CEREAA, France Street-in-Grid modelling for multi-pollutants
10:00-10:30 am	Keynote Speech Nicolas Coulombel, LVMT, France Evaluation of Low Traffic Neighborhoods and Scale Effects: The Paris Case Study
10:30-11:00 am	Keynote Speech (Virtual) Valéry Masson, CNRM, France Urban meteorology modelling and the Paris 2024 Olympics Research Demonstration Project
11:00-11:10 am	Coffee Break
Session 2	Local Scale Air Quality Modeling (Co-Chairs: Lya Lugon and Sunling Gong)
11:10-12:25 am	Keynote Speech (Virtual) Sunling Gong, The China Meteorological Administration, China Development and application of a street-level meteorology and pollutant tracking system (S-TRACK) Tao Wang, Institute of Atmospheric Physics, Chinese Academy of Sciences IAQMS-street v2.0: a two-way coupled regional-urban-street-network model system for Beijing, China Jian Zhong, University of Birmingham, UK Street-scale resolution air quality modelling for the West Midlands, UK Saurabh Kumar, University of Hertfordshire, UK Enhanced air quality predictions over Southampton and Portsmouth, UK region using MAQS-Health modeling system

12:25 pm-1:55 pm **Lunch Break**

Session 3

**Local Scale Air Quality Modeling
(Co-Chairs: Gerald Mills and Yelva Roustan)**

1:55-3:10 pm

Keynote Speech

Gerald Mills, the University College Dublin, Ireland (invited)

The WUDAPT project - Creating the scientific infrastructure to support urban-scale climate sciences.

José Agustín García Reynoso, Universidad Nacional Autónoma de México, Instituto de Ciencias de la Atmósfera y Cambio Climático

Pollutant emissions temporal profiles from traffic data for use in air quality model emissions inventory developing

Thibaud Sarica, CEREAA, France

Development of the street-network model MUNICH: Introduction of concentration heterogeneities in the street

Alice Maison, CEREAA, France

Modelling the impacts of urban trees on air quality in streets.

3:10-3:30 pm

Coffee Break

Session 4

**Local Scale Air Quality Modeling
(Chair: Karine Sartelet)**

3:30-4:45 pm

Keynote Speech

Esther Rivas, CIEMAT, Spain

Advances on the Urban Air Quality and Thermal Comfort simulations at microscale

Konstantin Kuznetsov, GRASP, France

Multi-scale chemistry-transport modelling of the 2022 extreme Sahara dust event over Paris

Benoît Cuilhé, CEREAA, France

Precomputed dispersion database for air-quality at local scale using code_saturne CFD solver.

Xiaona Shang, Ciencias de la Atmósfera y Cambio Climático

Application of concentration technology in online optical detection of atmospheric aerosol

7:30-9:00 pm

Social Dinner

**Day 5 (Friday, March 10), The 3rd Street-in Grid/Urban Air Quality Modeling Symposium,
Room P202, Ecole des Ponts ParisTech, 12 Boulevard Copernic - 77420 Champs-sur-
Marne, France**

Time	Activities
8:30-9:00 am Session 5	Registration and A/V Upload for Oral Presenters Urban Air Quality Modeling (Co-Chairs: Alexander Baklanov and Antoine Waked)
9:00-10:30 am	Keynote Speech Alexander Baklanov, WMO, University of Copenhagen, Denmark (invited) WMO Urban Cross-Cutting Focus toward Climate Smart and Sustainable Cities: Integrated Urban System Methodology and Key Performance Indicators Jingyuan Cao, Peking University College of Environmental Science and Engineering Significant land cover changes in China during 2001–2019: Implications for direct and indirect effect on surface ozone concentration Abdoulaye Bouya Diop, Gaston Berger University, Senegal (Virtual) Atmospheric Conditions for Uplift and Dust Transport in the Latitudinal 10_ North–20_ North Band in Africa Antoine Waked, Earth Link and Advanced Resources Development AirWare: An Air Quality Assessment and Management Information System Yang Zhang, Northeastern University High resolution modeling of air pollutants and greenhouse gases using WRF-Chem-GHGs
10:30-10:45 am Session 6	Coffee Break Human Exposure to Urban Air Pollution (Chairs: Rafael Borge García and Yelva Roustan)
10:45-12:15 pm	Keynote Speech Rafael Borge García, Universidad Politécnica de Madrid, Spain Multi-scale exposure assessment to air pollution in Madrid Lya Lugon, CEREAs, France Effect of vehicle fleet composition and mobility on outdoor population exposure: A street resolution analysis in Paris José Agustin Garcia Reynoso, Universidad Nacional Autonoma de Mexico, Instituto de Ciencias de la Atmósfera y Cambio Climático Impact on Air Quality in the TOLUCA valley metropolitan zone due to the application the no-driving day programme Myrto Valari, LMD, France

Modeling the exposure of the Parisian population to atmospheric PM2.5 and ozone concentrations.

Taos Benoussaid, LISA, France

Modelling socio differentiated exposure to air pollution in the Greater Paris

12:15 pm-1:45 pm **Lunch Break**

Session 7

**Multi-scale Air Quality Modeling and Research Needs (Virtual)
(Co-Chairs: Youngseob Kim and Yang Zhang)**

1:45-3:15 pm

Maria de Fatima Andrade, WMO GURME, Universidade de São Paulo, Brazil
The urban research in Meteorology and Environment in the scope of the WMO/GAW GURME

Chao Lin, The University of Tokyo, Japan

Large-eddy simulations on pollutant reduction effect of hedge- and solid barriers in an idealized street canyon

Cédric Flageul, Université de Poitiers, France

RANS simulation of street-scale pollutant dispersion by coupling chemical reaction, aerosol dynamics, and CFD

Luisa T. Molina, Molina Center for Energy and the Environment, USA

Technical challenges and research needs of applying atmospheric modeling in air quality management of megacities: Experience from Mexico City Metropolitan Area

Cyril Joly, AIRPARIF, France

A BLUE implementation for a fine-scaled urban AQ model and its calibrated uncertainties

Sergio Ibarra-Espinosa, Cooperative Institute for Research in Environmental Sciences & NOAA Global Monitoring Laboratory, USA.

The Vehicular Emissions INventory model (VEIN) and the integrations with MUNICH.

3:15-3:30 pm

Coffee Break

Session 8

Open Discussions: Collaboration and Funding Opportunities (Discussion Leaders: Yang Zhang, Karine Sartelet, and Alexander Baklanov)

3:30-5:00 pm

**Panel Discussion: Collaboration and Funding Opportunities on Street-in-Grid and Urban Air Quality Research: from Emissions to Exposure
Invited Panelists**

Alexander Baklanov, WMO

Karine Sartelet, CEREAs, France
Sunling Gong, CMA, China
José Agustín García Reynoso, Universidad Nacional Autónoma de México
Gerald Mills, the University College Dublin, Ireland
Yang Zhang, Northeastern University, U.S.A.

5:00 pm

Adjourn