

**The 2nd Street-in-Grid (SinG) Modeling Symposium and
the 3rd SinG Model Training Workshop
(First Announcement and call for abstract, March 7, 2019)**

Champs-sur-Marne, France
June 24 – 28, 2019

Air pollution causes 7 million death per year globally (1/8 of total global deaths) and is now the single largest environmental health risk, particularly in megacities and other urban areas where more than half of the world's total population lives. Rapid population growth and urbanization worldwide accelerate eco-environmental/socio-economic stress as well as adverse climatic and health impacts on urban dwellers. Atmospheric modeling research has largely been performed on a horizontal grid spacing of 4-km or larger due to a lack of understanding of the local-scale phenomena, appropriate parameterizations, and adequate modeling tools and computer resources. Urban/local street level air pollution, climate change, and their impacts on population exposure and human health have increasingly received attentions by both researchers and policy makers around the world. Recognizing the urgent need for scientific advancement, pollution/exposure assessment, policy-making, and public health protection at urban/local scales, we are pleased to announce that the 2nd Street-in-Grid (SinG) Modeling Symposium and the 3rd SinG Model Training Workshop will be jointly held in Champs-sur-Marne, a suburb region of Paris, France during June 24-28, 2019. The SinG symposium and training workshop aim at advancing scientific understanding of local scale atmospheric phenomena, promoting state-of-the-science urban-street level modeling tools for complex interactions among urban air pollution, climate, and health, and building a high-level platform for scientists, engineers, managers, and government officials worldwide to review recent science and modeling advancement, identify research priority and direction, tackle technological and computational challenges, and provide scientific foundation for air pollution control policies and actions towards environment and human health protection. The SinG model training workshop will also provide hands-on training for a state-of-the-science SinG modeling system to students, postdoctoral researchers, and professionals.

Themes

- Street-in-Grid model development and application
- Urban/street level air quality and climate modeling
- Urban traffic emissions and impact on air quality and human health
- Urban canopy, heat island, and boundary layer modeling
- Urban climate extreme: heat waves, stagnation, and compound extreme events

Important Dates

- Deadline for abstract submission: April 29, 2019
- Acceptance notice to be sent by May 6, 2019
- Registration: March 8-June 24, 2019

Abstract Submission and Registration

We will accept abstracts during March 8-May 11, 2019. The registration will be open during March 8-June 24, 2019. The registration fees for the 1-day symposium and the 4-day SinG model training are shown below. Please register at <https://enquetes2.enpc.fr/index.php/861732?lang=en>. For questions regarding the registration and symposium/workshop, please contact Dr. Youngseob Kim at youngseob.kim@enpc.fr

Date	Industry	Academia ¹	Student ²
Symposium (June 28, 2019)	€400	€200	€100
Training workshop (June 24 – 27, 2019)	€360		

¹Including federal/state/local governments

²A copy of the student ID is required during the registration.

Location and Direction

- Address: Ecole des Ponts ParisTech (Symposium: Navier amphitheater, Workshop: P402), 12 Boulevard Copernic - 77420 Champs-sur-Marne, France
- By train:
RER (High speed train) **Line B** (blue line) from CDG airport to Chatelet-les-Halles
Then RER **Line A** (red line) from Chatelet-les-Halles to Noisy-Champs
(exit 3 – Cité Descartes)
- By taxi: ABC taxis (+33 1 43 83 64 00)
<http://www.parisaeroport.fr/en/passengers/access/paris-charles-de-gaulle/taxi/paris-cdg-taxi>
- Getting to the school Ecole des Ponts ParisTech
<http://www.enpc.fr/en/getting-school>

Hotel Accommodation

- Hotel IBIS Marne-La-Vallée Champs
 - Address: 8, boulevard Newton - 77420 Champs-sur-Marne
- Hotel IBIS Marne-La-Vallée Noisy-le-Grand
 - Address: 4, allée Bienvenue – 93160 Noisy-le-Grand
- Hotel IBIS budget Marne-La-Vallée Noisy-le-Grand
 - Address: 9 rue de l'Université – 93160 Noisy-le-Grand

Organizers

- Dr. Pietro Bernardara, Director, Centre d'Enseignement et de Recherche en Environnement Atmosphérique (CEREA), joint laboratory of Ecole des Ponts ParisTech and EDF R&D, Marne-la-Vallée, France
- Dr. Yang Zhang, Professor, Department of Marine, Earth and Atmospheric Sciences, North Carolina State University (NCSU), Raleigh, NC, U.S.A.

Sponsors

- CEREA (Ecole des Ponts ParisTech and EDF R&D), France
- Office of Global Engagement, NCSU, U.S.A.

SinG Model Training Instructors

- Youngseob Kim, research engineer, CEREa, youngseob.kim@enpc.fr
- Yelva Roustan, research scientist, CEREa, yelva.roustan@enpc.fr

Program Background and Agenda

Street-in-Grid model (SinG) is a new multi-scale model of urban air pollution (Kim et al., 2018). SinG dynamically combines a 3D Eulerian chemical-transport model (Polair3D) with a street-network model, the Model of Urban Network of Intersecting Canyons and Highways (MUNICH). Polair3D of the Polyphemus air quality modeling platform (Mallet et al., 2007, <http://cerea.enpc.fr/polyphemus/>) has been widely applied in Europe, North America, South America, Asia, and Africa (e.g., Sartelet et al., 2012; Zhang et al., 2013a, b). MUNICH is based conceptually on the SIRANE general formulation (Soulhac et al., 2011). MUNICH consists of two main components: the street-canyon component, which represents the atmospheric processes in the volume of the urban canopy, and the street-intersection component, which represents the processes in the volume of the intersection. These components are connected to the Polair3D model at roof level and are also interconnected. The combined model system, SinG, aims at improving urban street-level pollutant concentrations by modeling both background and street-level concentrations at the same time. The model development has been conducted at CEREa, France with funding from EDF R&D and EDF R&D China. Its first application has been realized over the Paris region. The model is being applied over other urban areas in France, China, Brazil, and U.S.

SinG modeling symposium and training workshops have been co-organized by CEREa and NCSU in France and China. The training covered a number of topics including the SinG concept, the 3-D Polair3D model, the MUNICH model, as well as how to prepare input data and set up the configurations for application using SinG. More information regarding the last SinG model training workshops can be found at <http://cerea.enpc.fr/sing-workshop/index.html> and <http://cerea.enpc.fr/sing-workshop-2nd/index.html>.

We have engaged with two journals for publication of a special issue on “Air Quality Research at Street-Level” jointly organized between Atmospheric Chemistry and Physics (ACP) and Geoscientific Model Development (GMD), see https://www.geosci-model-dev.net/special_issue10_994.html and https://www.atmos-chem-phys.net/special_issue994.html. All SinG symposium/training workshop participants are highly encouraged to submit your papers to this special issue on GMD or ACP. Your paper will be subjected to the journal’s formal review and will be published in this special issue once it is accepted.

References

Mallet, V., D. Quélo, B. Sportisse, M. Ahmed de Biasi, É. Debry, I. Korsakissok, L. Wu, Y. Roustan, K. Sartelet, M. Tombette and H. Foudhil (2007), Technical Note: The air quality modeling system Polyphemus, *Atmos. Chem. Phys.*, 7, 5479 - 5487.

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Soulhac, L., Salizzoni, P., Cierco, F.-X., and Perkins, R. (2011), The model SIRANE for atmospheric urban pollutant dispersion; part I, presentation of the model, *Atmos. Environ.*, 45, 7379 – 7395, doi:10.1016/j.atmosenv.2011.07.008.

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