10th International Workshop on Air Quality Forecasting Research

Wednesday 20 October 2021 - Friday 22 October 2021

Time (GMT)	Activity	Moderators/Speakers	Title
Wednesday, October 20, 2021			
12:30	**Sign-in to the Webex Platform**		
13:00-13:10	**Welcome, Opening Remarks**	**Luisa T. Molina and Agustin Garcia**	
13:10-13:40	**Keynote Presentation (invited)**		
13:10-13:40		**Gregory Carmichael** (Center for Global and Regional Environmental Research, University of Iowa, USA)	Advancing Atmospheric Composition Predictions and Related Services to Meet the Growing Societal Needs
13:40-15:25	**Session 1. Operational Air Quality Forecasting: Progress and Challenges**		
13:40-13:45	Introduction (Moderator)	**Mike Moran** (Environment and Climate Change Canada)	
13:45-14:30	**Panel Presentations (invited)**		
13:45-14:45		**Radenko Pavlovic** (*Meteorological Service of Canada,* ECCC, Canada)	Overview of the ECCC Operational AQ Forecasting Program: Status, Recent Improvements, and Perspectives
14:00-14:15		**Ivanka Stajner** (NOAA Environmental Modeling Center, College Park, MD, USA)	Development of NOAA's Next Generation Air Quality and Aerosol Predictions
14:15-14:30		**Vincent-Henri Peuch** (Copernicus Atmosphere Monitoring Service, ECMWF, Reading, UK)	Progress and Challenges with Air Quality Forecasting in Europe
14:30-14:45	**Panel Discussion**		
14:45-15:25	**Oral Presentations (7 min each)**		
14:45-14:52		**Li Zhang**, Georg Grell, Raffaele Montuoro et al.	Development and Evaluation of the Aerosol Forecast Member in NCEP's Global Ensemble Forecast System (GEFS-Aerosols)
14:52-14:59		Ariel Stein; Barry Baker; **Patrick Campbell** et al.	Advancement of the National Air Quality Forecast Capability using the NOAA Global Forecast System: Model Development and Community Applications
14:59-15:06		**Krisztina Lázár**, Anita Tóth, Zita Ferenczi, Emese Homolya	Effect of the Uncertainty in Meteorology on Air Quality Model Predictions
15:06-15:13		**Nikolay Balashov,** Amy Huff, Anne Thompson	Interpretation of Probabilistic Surface Ozone Forecasts: A Case Study for Philadelphia
15:13-15:20		**Sylvain Ménard**, Jack Chen, Konstantinos Melenaou et al.	Environment and Climate Change Canada's FireWork Forecasts during the 2021 Fire Season and Recent System Upgrades
15:20-15:27		Alexander Baklanov, **Daniel Tong**, Patrick M. Manseau, Radenko Pavlovic	Improving Collective Capability of Vegetation Fire and Smoke Pollution Forecasts over North America

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15:27-15:35		**George Georgiou**, Theodoros Christoudias, Jonilda Kushta et al.	Real-Time Air Quality Forecasting over the Eastern Mediterranean with WRF/Chem
15:35-15:45	**Break**		
15:45-17:00	**Session 2. Emissions and Inventories**		
15:45-15:50	Introduction (Moderator)	**Nicolas Huneeus** (Departamento de Geofísica, Universidad de Chile, Santiago, Chile)	
15:50-16:35	**Panel Presentations (Invited)**		
15:50-16:05		**Brian McDonald** (NOAA Chemical Sciences Laboratory, Boulder, CO, USA)	Developing Near Real-time Emissions over the US during the COVID-19 Pandemic
16:05-16:20		**Andriannah Mbandi** (South Eastern Kenya University, Kenya)	The Integrated Assessment of Air Pollution, Climate Change and Sustainable Development in Africa
16:20-16:35		**Mauricio Osses** (Departamento Ingeniería Mecánica, Universidad Técnica Federico Santa María, Chile)	Transport Emissions in Chile, Current Situation and Looking Ahead for a Carbon-Neutral Future?
16:35-16:45	**Oral Presentation (10 min)**	**Astrid Manders**, Renske Timmermans, Antoon Visschedijk et al.	Improving Black Carbon Modeling: Emissions and Model Evaluation
16:45-17:00	**Panel Discussion**		
17:00	**ADJOURN**		
Thursday, October 21, 2021			
12:30	**Sign-in to the Webex Platform**		
13:00-14:45	**Session 3. Data Assimilation (Ground-based and Satellite Observations)**		
13:00-13:05	Introduction (Moderator)	**Rajesh Kumar** (National Center for Atmospheric Research, Boulder, CO, USA)	
13:05-13:50	**Panel Presentations (invited)**		
13:05-13:20		**Arthur Mizzi** (NASA Ames/USRA, University of Colorado, Boulder, CO, USA)	Assimilation of Multiple Satellite Retrievals with Emissions Adjustment to Improve High Resolution Air Quality Forecast Skill and Predictability
13:20-13:35		**Antje Inness** (Copernicus Atmosphere Monitoring Service, ECMWF, Reading, UK)	Assimilation of Atmospheric Composition Observations in the Global Copernicus Atmosphere Monitoring Service (CAMS) System
13:35-13:50		**Fei Jiang** (International Institute for Earth System Science, Nanjing University, China)	Development of a Regional multi-Air Pollutant Assimilation System (RAPASv1.0) and its Application to Emission Inversion
13:50-14:05	**Panel Discussion**		
14:05-14:35	**Oral Presentations (10 min each)**		
14:05-14:15		**Youhua Tang,** Catherine Thomas, Cory Martin et al.	Develop and Evaluate the AIRNow Assimilation in JEDI for RRFS-CMAQ: a Case Study for Summer 2019
14:15-14:25		**Bo Huang**, Mariusz Pagowski, Samuel Trahan et al.	Near-Real-Time Global Aerosol Data Assimilation and Forecasting at NOAA/OAR/GSL
14:25-14:35		**Mariusz Pagowski,** Arlindo da Silva, Shih-Wei Wei et al.	Developing Aerosol Reanalysis at NOAA. Version 1.0: Methodology and Results
14:35-14:45	**Break**		

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14:45-16:10	**Session 4. Urban Air Quality Modeling**		
14:45-14:50	Introduction (Moderator)	**Pablo Saide** (University of California at Los Angeles, CA, USA)	
14:50-15:35	**Panel Presentations (invited)**		
14:50-15:05		**Sachin Ghude** (Indian Institute of Tropical Meteorology, Pune, India)	Integrated Air Quality Forecasting and Decision Support System for Delhi
15:05-15:20		**Jian He** (NOAA Chemical Science Laboratory, Boulder, CO, USA)	Modeling COVID Perturbation on Urban Emissions over the US
15:20-15:35		**Lya Lugon von Marttens** (Environ. Modelling, Max Planck institute for Meteorology, Hamburg, Germany)	Using Multi-scale Modeling to Calculate Primary and Secondary Pollutant Concentrations in Urban Areas with a Street Resolution
15:35-15:50	**Panel Discussion**		
15:50-16:10	**Oral Presentations (10 min each)**		
15:50-16:00		**Craig Stroud**, Rabab Mashayekhi, Alain Robichaud et al.	Analysis of Surface Ozone Exceedance Events in the Detroit/Windsor area during the Michigan-Ontario Ozone Source Experiment (MOOSE)
16:00-16:10		**Rodrigo Munoz-Alpizar**, Craig Stroud, Ayodeji Akingunola et al.	Recent Developments of a High Resolution Operational Air Quality System at ECCC
16:10-16:20	**Break**		
16:20-16:45	**Poster Presentations (5 min each)**		
16:20-16:25	Moderator	**Megan Melamed** (NOAA, Chemical Science Laboratory, Boulder, CO, USA)	
16:25-16:30		**Miguel Zavala**, Luisa T. Molina	Estimation of Uncertainties in Model-Ready Emissions Inventories for Air Quality Modeling Applications
16:30-16:35		**Congwu Huang**, Tijian Wang, Tao Niu et al.	A Data Assimilation Method Combined with Machine Learning and its Application to Anthropogenic Emission Adjustment in CUACE model
16:35-16:40		**Prashant Singh**, Bhupesh Adhikary, Pradeep Sarawade	Carbonaceous Aerosol from Open Burning and its Impact on Regional Weather in South Asia
16:40-16:45		**Cuauhtemoc Turrent,** Alejandro Dominguez, Agustin Garcia, Victor Almanza	Dispersion of Atmospheric Pollution from Surface Oil Burns in the Gulf of Mexico
16:45-17:00	**General Discussion (Day 1&2)**		
17:00	**ADJOURN**		
Friday, October 22, 2021			
12:30	**Sign-in to the Webex Platform**		
13:00-14:20	**Session 5. Using Observations for Model Evaluation**		
13:00-13:05	Introduction (Moderator)	**James Crawford** (NASA Langley Research Center, Virginia, USA)	
13:05-13:50	**Panel Presentations (invited)**		
13:05-13:20		**Tara Jensen** (National Center for Atmospheric Research, Boulder, CO, USA)	The Building Blocks for Informative Model Evaluation Activities
13:20-13:35		**Henk Eskes** (Royal Netherlands Meteorological Institute, Netherlands)	Validation of the Copernicus Atmosphere Monitoring Service forecasts and reanalyses

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13:35-13:50		**Agustin Garcia** (Instituto de *Ciencias de la Atmosfera y Cambio Climático,* UNAM, CDMX, Mexico)	Air Quality Evaluation System: Central México Case Study
13:50-14:05	**Panel Discussion**		
14:05-14:20	**Oral Presentations (7 min each)**		
14:05-14:12		**Peewara Makkaroon**, Yunyao Li, Daniel Tong et al.	Development and Evaluation of North America Wildfire Ensemble Forecast: Initial Application to the 2020 Western United States "Gigafire"
14:12-14:19		**Mike Moran**, Patrick M. Manseau, Si Jun Peng et al.	Routine Multi-model Performance Analysis over North America for Six Operational Air Quality Forecast Systems
14:20-14:30	**Break**		
14:30-16:26	**Session 6. Impacts (Application of AQ Modeling and Forecasting)**		
14:30-14:35	Introduction (Moderator)	**Alexander Baklanov** (WMO Research Department and University of Copenhagen, Denmark)	
14:35-15:50	**Panel Presentations (invited)**		
14:35-14:50		**Chunhong Zhou** (Chinese Academy of Meteorological Sciences, Beijing, China)	Sand and Dust Storm Forecasts and the extended R&D and Application of CUACE
14:50-15:05		**Jorge Pachón** (Facultad de Ingenieria, Universidad de la Salle, Bogotá, Colombia)	Assessment of Health Impacts in Bogota using an Air Quality Modeling Platform
15:05-15:20		**Ravan Ahmadov** (CU Boulder CIRES and NOAA/GSL, USA)	Operational Forecasting of Smoke, Visibility, and Smoke-Weather Interactions by the High-Resolution RAP/HRRR-Smoke models
15:20-15:35		**Michaela Hegglin** (Department of Meteorology, University of Reading, UK)	Effect of Climate Change on Air Pollution
15:35-15:50		**Luis Gerardo Ruíz Suárez** (Coordinación General de Contaminación y Salud Ambiental, Instituto Nacional Ecología y Cambio Climático, Mexico)	The Challenges of the Application of Air Quality Modeling and Forecasting in Decision Making in Mexico
15:50-16:05	**Panel Discussion**		
16:05-16:26	**Oral Presentations (7 min each)**		
16:05-16:12		**José Pablo Sibaja Brenes,** Rosa Alfaro Solís, María Martínez Cruz	Use of the AERMOD code to Estimate SO_2 Dispersion from Emissions of Turrialba Volcano, Costa Rica
16:12-16:19		Ariel Stein, Barry Baker, **Youngsun Jung** et al.	Operational Air Quality Model Version 6: New Updates and Performance Evaluation
16:19-16:26		**Xiaoyang Chen**, Yang Zhang, Daniel Tong et al.	Comparative Evaluation of Gas-Phase Chemistry and Aerosol Representations for the U.S. Next-Generation National Air Quality Forecast Capability using GFSv15-CMAQv5.3.1
16:30-17:10	**Concluding Remarks**		
		Johannes Flemming (CAMS, ECMWF, Reading, UK)	
		Guy Brasseur (Environmental Modelling, Max Planck institute for Meteorology, Hamburg, Germany)	
17:10	**ADJOURN**		