

17th GEIA Conference

Influence of Urbanization on Emissions Worldwide

School of Environment, Tsinghua University, Beijing, China

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PROGRAM

Wednesday 18 November 2015

7:30	8:30	Registration	
8:30	8:55	Welcome Session	
8:30	8:35	Welcome by Organizing Committee	Paulette Middleton
8:35	8:40	Welcome by Tsinghua University	Jiming Hao
8:40	8:55	Overview of GEIA and the Conference	Greg Frost
8:55	9:45	Megacities, Oral Session 1	Chairs: Leonor Tarrasón, Yuxuan Wang, Hugo Denier van der Gon
8:55	9:00	Theme Introduction: Megacities	Session Chairs
9:00	9:10	Direct Influence of China's Urbanization on Emissions from Residential, Commercial, and Transportation Sectors	Shu Tao
9:10	9:15	VOCs spatial distribution, source apportionment and emission sources impact implication in an urban area in Yangtze River Delta	Jie Zhang
9:15	9:20	Atmospheric Pollution and its Emission Sources in the Southeast Asian Mega city, Dhaka- Bangladesh	Abdus Salam
9:20	9:25	Top-down Estimates of Combustion Characteristics Over Megacities	Avelino Arellano
9:25	9:30	Environmental Governance in the Central Mexico Megalopolis	Beatriz Cardenas
9:30	9:45	Session discussion	
9:45	10:15	Break	
10:15	11:00	Megacities, Oral Session 2	Chairs: Leonor Tarrasón, Yuxuan Wang, Hugo Denier van der Gon
10:15	10:25	Estimation of anthropogenic CO2 emissions from OMI NO2 observations using chemistry transport modelling over Europe	Hugo Denier van der Gon
10:25	10:30	Long-Term Air Quality Modeling of the Los Angeles Basin	Brian McDonald
10:30	10:35	How TexAQS 2000 field campaign measurements identified critical emissions of ozone precursors in Houston, Texas, and resulted in effective ozone control strategies	Mark Estes
10:35	10:40	Spatial and temporal dynamics of atmospheric pollutants in London, UK	Carole Helfter (Presented by Ute Skiba)
10:40	10:55	Session discussion	
10:55	11:05	Poster Presenter Introductions: Megacities	
11:05	12:20	Megacities, Poster Session	Chairs: Leonor Tarrasón, Yuxuan Wang, Hugo Denier van der Gon
		African anthropogenic combustion emission inventory: specificities and uncertainties	Sekou Keita
		Direct energy consumption associated emissions by rural-to-urban migrants in Beijing	Shu Tao

	Towards multi-scale mapping of human carbon dioxide emissions from megacity Osaka, Japan	Yutaka Mori
	Impact of Land Cover and Land Use Change on Surface Ozone	Yi Zhang
	Quantitative Assessment of Vehicles Emissions through Dynamic and Conventional Emission factors approach	Dhirendra Mishra
	Source Sector Contributions to Aerosol Levels in Pakistan	Muhammad Zeeshaan Shahid (Presented by Imran Shahid)
	Impacts Of Emissions From Havana's Stationary Sources	Osvaldo Cuesta-Santos
	Source attribution of particulate matter in Chinese cities	Hugo Denier van der Gon
	NO _x emission estimates during the 2014 Youth Olympic Games in Nanjing	Jieying Ding
	Effects of Urbanization and Industrialization on Tropospheric NO ₂ variations over Western China	Yuanzheng Cui
	Operational air quality forecasting system development in Hubei, China	Li Liu
12:20	13:35 Lunch	
13:35	14:25 Inventories and Trends, Oral Session 1	Chairs: Greet Janssens-Maenhout, Zbigniew Klimont, Terry Keating
13:35	13:40 Theme Introduction: Inventories and Trends	Session Chairs
13:40	13:50 Anthropogenic emissions from 1970 to 2010	Claire Granier (Presented by Thierno Doumbia)
13:50	13:55 Challenges when downscaling the global EDGAR 4.3 emission inventory of CO ₂ to urban scale	Greet Janssens-Maenhout
13:55	14:00 Global methane budget and natural gas leakage based on long-term δ ¹³ CH ₄ measurements and updated isotopic source signatures	Stefan Schwietzke
14:00	14:05 Fire emission estimation with the Global Fire Assimilation System, GFAS: Indonesia 2015	Johannes Kaiser
14:05	14:10 Community Emissions Data System (CEDS) - New Historical Emissions for Aerosol and Chemistry Research	Steven Smith
14:10	14:25 Session discussion	
14:25	15:10 Inventories and Trends, Oral Session 2	Chairs: Greet Janssens-Maenhout, Zbigniew Klimont, Terry Keating
14:25	14:35 Multi-resolution Emission Inventory for China (MEIC): model framework and 1990-2010 anthropogenic emissions	Kebin He
14:35	14:40 Characteristics Of Emissions Of Air Pollutants From China's Cement Industry: Historical Trends And Prospects	Yu Lei
14:40	14:45 High-resolution ammonia emissions inventories in China from	Yu Song (Presented by Liu Mingxu)
14:45	14:50 Multi-scale Emission Inventory of Toxic Heavy Metals (MEITHM) from Anthropogenic Activities	Hezhong Tian
14:50	14:55 Insights from a bottom-up approach to estimate shipping emissions and design mitigation measures	Susana López-Aparicio
14:55	15:10 Session discussion	

15:10	15:40 Break	
15:40	16:15 Inventories and Trends, Oral Session 3	Chairs: Greet Janssens-Maenhout, Zbigniew Klimont, Terry Keating
15:40	15:45 Development of the Comprehensive Regional Emissions inventory for Atmospheric Transport Experiment (CREATE) in support of the Multiple Aircraft Filed Campaigns over East Asia	Jung-Hun Woo (Presented by Ki-Chul Choi)
15:45	15:50 Rising critical emission from emerging sectors in India	Saroj Kumar Sahu
15:50	15:55 Nepal Air Monitoring and Source Testing Experiment (NAMaSTE)	Prakash Bhawe
15:55	16:00 Development of National Emissions Inventory for Turkey	Alper Unal
16:00	16:15 Session discussion	
16:15	16:30 Poster Presenter Introductions: Inventories and Trends	
16:30	17:45 Inventories and Trends, Poster Session	Chairs: Greet Janssens-Maenhout, Zbigniew Klimont, Terry Keating
	Methane Emissions from Natural Gas Vehicles in China during CAREBEIJING	Da Pan
	Development and application of EIMS: An emission inventory processing software	Yaqiang Wang
	Global Thermal Power Plants Database: Unit-Based CO ₂ , SO ₂ , NO _x and PM _{2.5} Emissions in 2010	Dan Tong
	Assessment of emissions from transport sector of Azerbaijan	Sadig Hasanov
	Impact of NO ₂ and CO emission changes on atmospheric composition between 1980 and 2010	Thierno Doumbia
	Comparison of the biomass burning emissions over the 20 th century and recent years	Katerina Sindelarova (Presented by Thierno Doumbia)
	Impacts of biomass burning on regional air quality: a case study in Yangtze River Delta	Ying Xie
	A novel approach to produce road-level inventories of on-road greenhouse gas and air pollutant emissions	James Powell
	Sector-based 2013 non-road mobile source emission inventories and their spatial characteristics in China	Cheng Li
	The burned area product for climate and assessments from the ESA Fire CCI project	Johannes Kaiser
	Characterizing PM _{2.5} Emissions in an Urban Subarctic Environment	Wenxian Zhang (Presented by Chengzhi Wu)
	Updated trends in energy-related black carbon and carbon monoxide emissions: improved technology model and observational constraints	Tami Bond
	Long-term trend of air pollutants emissions in Japan	Jun-Ichi Kurokawa (Presented by Toshimasa Ohara)
18:00	20:00 Conference Dinner	

Thursday 19 November 2015

7:30	8:30	Registration	
8:30	9:50	Reports from GEIA Working Groups & International Partnerships	Chairs: Greg Frost, Paulette Middleton
8:30	8:40	China WG - East Asia Emissions Assessment (EA2)	Qiang Zhang
8:40	8:50	Non-Methane Volatile Organic Compounds (NMVOC) Emissions WG	Erika von Schneidemesser
8:50	9:00	Latin America/Caribbean WG - New emission scenarios for air pollutants and methane for Latin America and Caribbean	Zbigniew Klimont
9:00	9:10	Urban WG - Understanding Emissions in Urban Areas	Leonor Tarrasón
9:10	9:20	UNEP's Global Environmental Outlook 6	Terry Keating
9:20	9:30	Report from International Global Atmospheric Chemistry Project (IGAC)	Greg Frost
9:30	9:40	Report from Integrated Land Ecosystem Atmosphere Process Study (iLEAPS)	Alex Guenther
9:40	9:50	Session discussion	
9:50	10:20	Break	
10:20	11:10	Top-Down Emissions Analyses, Oral Session 1	Chairs: Johannes Kaiser, Toshimasa Ohara, Beatriz Cardenas
10:20	10:25	Theme Introduction: Top-Down Emissions Analyses	Session Chairs
10:25	10:35	Top-Down Emissions Studies using Atmospheric Observations and Modeling	Greg Frost
10:35	10:40	Fast emission estimates for rapidly changing economies constrained by satellite observations	Bas Mijling
10:40	10:45	Ammonia Distributions and Recent Trends by Thirteen-year AIRS Measurements	Juying Warner
10:45	10:50	VIIRS Nighttime Lights: Creating the Next Generation of Global Remotely-Sensed Nighttime Lights Products From VIIRS Day/Night Band (DNB) Data	Chris Elvidge (Presented by Tom Oda)
10:50	10:55	The use of satellite data for mapping fossil fuel CO ₂ emissions at multiple scales	Tom Oda
10:55	11:10	Session discussion	
11:10	11:55	Top-Down Emissions Analyses, Oral Session 2	Chairs: Johannes Kaiser, Toshimasa Ohara, Beatriz Cardenas
11:10	11:15	Monitoring And Assessment Of Regional Air Quality In China Using Space Observations (MARCOPOLO)	Ronald Van der A
11:15	11:20	Bottom-up and top-down estimates of ammonia emissions over China	Lin Zhang
11:20	11:25	Evaluation of emission inventory of air pollutants for Nanjing	Yu Zhao
11:25	11:30	Inverse modeling of emissions over Beijing-Hebei-Tianjin areas: Nested Air Quality Prediction Modeling System (NAQPMS) coupled with an ensemble Kalman Filter	Zifa Wang
11:30	11:35	A Novel Method to Analyzing NO ₂ Spatiotemporal Variability Over Eastern China	Yuchen Wang
11:35	11:40	Quantitative analysis of uncertainty in sector-based emission factors	Junyu (Allen) Zheng
11:40	11:55	Session discussion	
11:55	13:10	Lunch	

13:10	14:00 Top-Down Emissions Analyses, Oral Session 3	Chairs: Johannes Kaiser, Toshimasa Ohara, Beatriz Cardenas
13:10	13:20 Aircraft eddy covariance direct flux measurements	Alex Guenther
13:20	13:25 Inverse modeling of carbon fluxes over East Asia based on Lagrangian transport and dispersion model	Aijun Ding
13:25	13:30 Large-scale impact of East-Asian SO ₂ emissions – results from recent aircraft observations	Hans Schlager
13:30	13:35 Analyzing the spatial and temporal variability of the composition of anthropogenic VOC urban emissions from observations: a basis for the CMIP historical emission inventory	Agnès Borbon
13:35	13:40 VOCs Emissions from Vehicle Evaporative Processes	Huan Liu
13:40	13:45 Measurement of In-Use Passenger Vehicle Emissions in Three Urban Areas of Developing Nations	Mauricio Osses
13:45	14:00 Session discussion	
14:00	14:10 Poster Presenter Introductions: Top-Down Emissions Analyses	
14:10	15:30 Top-Down Emissions Analyses, Poster Session	Chairs: Johannes Kaiser, Toshimasa Ohara, Beatriz Cardenas
	Improved understanding of global CO emissions with HIPPO and two-way modeling	Yingying Yan
	Decoupling resolution of gridded emissions and downscaling spatial proxies: case study for the Jing-Jin-Ji region in China	Bo Zheng
	On-road emission characteristics of VOCs from vehicles in Beijing, China	Zhiliang Yao
	Characterization of Road Freight Transportation and its impact on the National Emissions Inventory in China	Huan Liu
	Inverse modeling of toluene emissions in the Pearl River Delta and Hong Kong using atmospheric measurements	Xuekun Fang
	Comparison of GEOS-Chem aerosol optical depth with AERONET and MISR data over the contiguous United States	Liangfu Chen
	Revisiting Real World Emission Factors for Biomass burning, Biofuels and Mobile Sources	Benjamin Guinot
	Urban measurements of NMVOCs and a comparison to their representation in emission inventories	Erika von Schneidemesser
	Emission factors of nonmethane volatile organic compounds from burning of China crop residues	Hiroshi Tanimoto (Presented by Kohei Ikeda)
	Ambient Air Monitoring – What are the right tools for the job?	Rui Li
	Passive monitoring – A guide to sorbent tube sampling for EPA Method 325	Caroline Widdowson
	Inverse estimation of California methane emissions and their uncertainties using FLEXPART-WRF	Yuyan Cui
	Identification of Gas Flares by means of BIRD images	Alexandre Caseiro
	POMINO: Improved satellite NO ₂ retrieval and implications for NO _x emission constraints	Mengyao Liu
	Satellite-based constraints on NO _x emissions from anthropogenic area sources	Meng Li
	NO _x lifetime and emissions of hotspots in polluted background estimated by satellite observations	Fei Liu
15:30	16:00 Break	

16:00	17:30	Science-Policy Discussion: <i>How can new emissions understanding be better applied to improve policy and decision making around the world?</i>	Chairs: Greg Frost, Leonor Tarrasón, Paulette Middleton
17:30	17:45	Demonstration of ECCAD, the GEIA Emissions Database Portal	Cathy Liousse
17:45	18:00	Demonstration of the Community Emissions Data System (CEDS) for Historical Emissions	Steven Smith
18:00	20:00	Conference Reception	

Friday 20 November 2015

7:30	8:30 Registration	
8:30	9:20 Impacts and Scenarios, Oral Session 1	Chairs: Cathy Liousse, Alex Guenther, Ute Skiba
8:30	8:35 Theme Introduction: Impacts and Scenarios	Session Chairs
8:35	8:45 Health and climate dual impact of African anthropogenic combustion aerosol emission change in 2030	Cathy Liousse
8:45	8:50 Air quality impacts of electric vehicle in Taiwan	Nan Li
8:50	8:55 Reducing Residential Solid Fuel Burning Emissions in South Africa	Roelof Burger
8:55	9:00 Emissions and Mitigation Scenarios for Residential Combustion of Solid Fuels	Tami Bond
9:00	9:05 Emissions Understanding and the Global Energy System Transformation	Paulette Middleton
9:05	9:20 Session discussion	
9:20	10:15 Impacts and Scenarios, Oral Session 2	Chairs: Cathy Liousse, Alex Guenther, Ute Skiba
9:20	9:30 Emissions Scenarios for Effective Policies: China's SO2 control	Yuxuan Wang
9:30	9:35 Revisiting of China's carbon emissions	Zhu Liu
9:35	9:40 Impact assessment of anthropogenic emission control upon aerosol mass burden during heavy pollution episodes over North China Plain	Meigen Zhang
9:40	9:45 Air Pollutant Emissions from Anthropogenic Sources in China: Current Status and Future Projections	Shuxiao Wang
9:45	9:50 VOC species and emission inventory from vehicles and their SOA formation potentials estimation in Shanghai, China	Huang Cheng
9:50	9:55 Update of the Biogenic Volatile Organic Compounds Emission Inventory and Its Application in the Improvement of Ozone Modeling Results in Yangtze River Delta Region, China	Li (Lily) Li
9:55	10:00 Global Sources and Transport of Air Pollution: A Chinese Case	Jintai Lin
10:00	10:15 Session discussion	
10:15	10:45 Break	
10:45	10:50 Poster Presenter Introductions: Impacts and Scenarios	
10:50	12:00 Impacts and Scenarios, Poster Session	Chairs: Cathy Liousse, Alex Guenther, Ute Skiba
	Future Emissions of Air Pollutants and Greenhouse Gases over East Asia	Younha Kim
	High Temporal and Spatial Resolution Chinese power plant Industry Emission Inventory, 2014	Xin Bo
	Urbanization of Chengdu in the past 13 years: Changes in air pollution source apportionments	Miao Feng
	China's international trade and air pollution: 2000 - 2009	Ruijing Ni
	Economic Impacts of Health Costs Induced by Air Pollution in China	Yang Xia
	Modeling the Regional Impacts of Cookstove Emissions on Air Quality in Western China	Scott Archer-Nicholls
	Cities as positive actors on GHG emission mitigation in China	Yao Yang
	Revealing the hidden health costs embodied in Chinese exports	Xujia Jiang
	Spatial and Temporal Evaluation of USEPA NATA Database for Environmental Equity Analysis in Cook County, IL	Cynthia Cordova-Orellana

Development of a coupled biogenic emission module in an earth system model	Jingqiu Mao
12:00 12:15 Concluding Session	Leonor Tarrasón