# 2024 International Conference on Air Benefit and Cost and Attainment Assessment

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# Symposium on Atmospheric Haze Chemistry

September 20–22, 2024

Shanghai, China

https://www.abacas-dss.com/Conference/2024/

(Third Announcement)

Following the previous ten successful ABaCAS conferences, 2024 International Conference on Air Benefit and Cost and Attainment Assessment & Symposium on Atmospheric Haze Chemistry (ABaCAS 2024) will be held in Shanghai, China, 20–22 September 2024. This conference will be jointly hosted by the Tsinghua University, Shanghai Academy of Environmental Sciences (SAES), Research Center for Eco-Environmental Sciences CAS, Zhejiang University, and South China University of Technology. The Conference aims at providing an exceptional platform for scientists or policy makers from various fields to discuss air pollution control strategies, carbon neutrality roadmap related to energy and the environment for China or worldwide on city, regional or global scales. In addition to the two-day conference (21–22 September), a one-day training workshop (20 September) on the "Air Benefit and Cost and Attainment Assessment System (ABaCAS)" will also be provided to air quality modelers, managers and scientists of interest. During the workshop, demos and handson sessions on the state-of-art air quality management and assessment systems will be

provided, especially for their practical application in China.

### **Permanent Host**

-Tsinghua University, China

### **Hosts**

- —Shanghai Academy of Environmental Sciences, China
- —Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China
- -Zhejiang University, China
- —South China University of Technology, China

# **Organizers**

- —Fudan University, China
- -Hefei Institutes of Physical Science, Chinese Academy of Sciences, China
- —Nanjing University of Information Science and Technology, China
- -Shanghai Jiao Tong University, China
- -Shanghai Environmental Monitoring Center, China

# **Co-organizers**

- —Key Laboratory of Sources and Control of Air Pollution Complex (Ministry of Ecology and Environment of the People's Republic of China)
- —State Key Joint Laboratory of Environment Simulation and Pollution Control
- —Key Laboratory of Formation and Prevention of Urban Air Pollution Complex (Ministry of Ecology and Environment of the People's Republic of China)
- —Key Laboratory of Optical Monitoring Technology (Ministry of Ecology and Environment of the People's Republic of China)
- —Shanghai Key Laboratory of Atmospheric Particle Pollution and Prevention
- —Jiangsu Key Laboratory of Atmospheric Environment Monitoring and Pollution Control
- —Dianshan Lake Scientific Observation Station in Yangtze Delta Region (Ministry of Ecology and Environment of the People's Republic of China)
- —Shanghai Association of Environmental Protection Industry

### **Supporters**

— Energy Foundation China

### **Conference Chairs**

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- —Kefa CEN, Academician of Chinese Academy of Engineering
- —Hong HE, Academician of Chinese Academy of Engineering

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- —Daiqi YE, Professor
- —Hong YE, Professor
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- —Yu ZHAO, Professor
- -Mei ZHENG, Professor
- -Yun ZHU, Professor
- -Carey JANG, Chair Professor
- —Greg CARMICHAEL, Professor
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- —Jim KELLY, Doctor
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- —Jerry LIN, Professor
- —Jonathan PLEIM, Doctor
- -Joshua FU, Professor
- —Jung-Hun WOO, Professor
- —Peter LOUIE, Doctor
- -Rohit MATHUR, Doctor
- -Savitri GARIVAIT, Professor
- -Bui Ta LONG, Professor
- —Thomas HO, Professor
- -Yang LIU, Professor

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Shuxiao WANG Qingyan FU Jianmin CHEN

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Cheng HUANG	Carey JANG	Qing LI	Hong LIAO
Xin LIU	Hongli WANG	David WONG	Pinhua XIE
Hongliang ZHANG	Yuqiang ZHANG	Bin ZHAO	Yun ZHU

### **Conference theme**

Synergistic reduction of air pollutants and carbon for further improvement of air quality

# **Sessions (Include but not limited to)**

1. Emission inventory for atmospheric pollutants and greenhouse gases

Session chairs: Qiang ZHANG, Junyu ZHENG

Conveners: Cheng HUANG, Yu ZHAO, Bo ZHENG, Zhijiong HUANG

2. Advancing technologies applied in source emission measurements

Session chairs: Jianguo LIU, Jingkun JIANG

Conveners: Xiangxian LI, Tonghao LIU, Gang WANG

3. "Ground-air-space" monitoring for air pollutants and greenhouse gases

Session chairs: Jianmin CHEN, Pinhua XIE

Conveners: Cheng LIU, Song GUO, Renzhi HU, Guo LI, Shengrong LOU

4. Air quality modelling and cost-benefit analysis for air pollution control

Session chairs: Shuxiao WANG, Zifa WANG

Conveners: Jianlin HU, Qi YING, Hsin-Chih LAI, David WONG, Bin ZHAO

5. Roadmap to synergistic control of air pollutants and carbon

Session chairs: Gang YAN, Xi LU

Conveners: Hancheng DAI, Haikun WANG, Yang OU, Yuqiang ZHANG,

Yuxuan ZHANG

6. Continuous reduction of urban PM2.5 and ozone pollution

Session chairs: Fahe CHAI, Qingyan FU

Conveners: Peter LOUIE, Jingnan HU, Miao NING, Dan Dan HUANG

7. Atmospheric environment and health

Session chairs: Haidong KAN, Taicheng AN

Conveners: Qing LI, Yingjun LIU, Jianwei GU

8. Big data and artificial intelligence technology in the atmospheric

environment

Session chairs: Dabo GUAN, Jianjun LI

Conveners: Yun ZHU, Jian GAO, Zhen CHENG, Yu ZHAN

### 9. Atmospheric haze chemistry

Session chairs: Hong HE, Maofa GE

Conveners: Chuncheng CHEN, Weigang WANG, Biwu CHU, Qingru WU,

Guangjie ZHENG

# **Important Dates**

Formal conference: 21-22 September, 2024
ABaCAS training workshop: 20 September, 2024
Early bird registration date: 1 April – 31 July, 2024

Full registration date: 1 August – 20 September, 2024

### Location

the Longemont Shanghai Hotel, 1116 West Yan'an Road, Shanghai, China

### **ABaCAS Schedule**

### **Conference Overview**

Date	Time	Event	
20 Santanahan	9:00~17:35	ABaCAS Training Workshop	
20 September	All day	Registration	
	8:30~9:00	Opening Ceremony	
	9:30~12:00	Plenary Session	
21 September	13:30~17:00	Invited Presentations	
	17:00~18:00	Plenary Session	
	19:00~22:00	Youth forum/Poster session	
		Parallel Session 1: Emission inventory for atmospheric	
		pollutants and greenhouse gases	
22 Santambar	8:30~12:00	Parallel Session 2: Advancing technologies applied in	
22 September		source emission measurements	
		Parallel Session 3: "Ground-air-space" monitoring for	
	air pollutants and greenhouse gases		

		Parallel Session 7: Atmospheric environment and
		health
		Parallel Session 9: Atmospheric haze chemistry
		Parallel Session 2: Advancing technologies applied in
		source emission measurements
		Parallel Session 4: Air quality modelling and cost-
	12.20 18.00	benefit analysis for air pollution control
		Parallel Session 5: Roadmap to synergistic control of
	13:30~18:00	air pollutants and carbon
		Parallel Session 6: Continuous reduction of urban
		PM <sub>2.5</sub> and ozone pollution
		Parallel Session 8: Big data and artificial intelligence
		technology in the atmospheric environment

# **Conference Agenda**

Opening Ceremony				
Ti	Time: 21 September 8:30~9:00 Venue: 4F Jade Ballroom			
	Moderator: Hon	g HE		
Time	Time Event			
8:30~9:00	Welcome Remarks			
9:00~9:30	Group photo /Tea break			
	Plenary Session			
Time: 21 September 9:00~12:00 Venue: 4F Jade Ballroom				
	Moderators: Shu TAO, Shuxiao WANG			
Time	Title		Presenter	
9:30~9:55	影响大气污染控制决策的重要	因素	Bingjiang LIU Special Guest	
9:55~10:20	Ambient Air Quality Standards for Protection	Health	Tong ZHU Peking University	

10:20~10:45	大气细颗粒毒理与健康危害	Guibin JIANG Research Center for Eco- Environmental Sciences, CAS
10:45~11:10	加快绿色低碳科技创新,推动减污降碳协同治理	Xiang GAO Zhejiang University
11:10~11:35	Nitrogen-Containing Organics Aerosol and Molecular Species in the Atmosphere	Jianmin CHEN Fudan University
11:35~12:00	ABaCAS historical overview and recent AI applications	Carey Jang South China University of Technology
12:00~13:30	Lunch	

# **Invited Presentation**

Time: 21 September 13:30~17:00 Venue: 4F Jade Ballroom

Moderators: Min SHAO, Havala PYE			
Time	Title	Presenter	
13:30~13:45	TBD	Xiangdong LI The Hong Kong Polytechnic University	
13:45~14:00	TBD	Armistead (Ted) RUSSELL Georgia Institute of Technology	
14:00~14:15	Environmental justice and public health implications of zero-emission vehicles: A comprehensive analysis in California	Yifang ZHU University of California, Los Angeles	
14:15~14:30	大气环境超站在揭示污染成因中的作用	Min HU Peking University	
14:30~14:45	Climate mitigation of global energy infrastructure	Dabo GUAN Tsinghua University	
14:45~15:00	Future Air Quality in Northeast Asia under Carbon Neutrality	Jun-Hun WOO Seoul National University	
15:00~15:15	Integration of Machine Learning and Street- Level Simulation for High-Resolution Street Pollution Forecasts	Shanling GONG Chinese Academy of Meteorological Sciences	
15:15~15:30	Tea Break		
Moderators: Qingyan FU, Kenneth LEUNG			
15:30~15:45	Air quality management and source apportionment	Fahe CHAI Chinese Research	

		Academy of Environmental Sciences
15:45~16:00	Current studies of woodsmoke, pathogens and microplastics for tropospheric particle chemistry	Hartmut Herrmann Leibniz Institute for Tropospheric Research
16:00~16:15	Understanding the impact of human activity on air quality: a modeling look at aerosol pollution before and after the industrial revolution	Zifang WANG Institute of Atmospheric Physics, CAS
16:15~16:30	Impacts and drivers of future climate change on ozone pollution in China under carbon neutral pathway	Hong LIAO Nanjing University of Information Science and Technology
16:30~16:45	Describing reactive organic carbon with the Community Regional Atmospheric Chemistry Multiphase Mechanism (CRACMM)	Dr. Havala PYE U.S. EPA
16:45~17:00	TBD	Shuxiao WANG Tsinghua University
	Plenary Session	

Time: 21 September 17:00~18:00 Venue: 4F Jade Ballroom

Moderators: Jianguo LIU, Qiang ZHANG			
Time	Title	Presenter	
17:00~17:30	China's pathway selection and strategic pursuit to achieve carbon neutrality in climate change mitigation	Xiaoye ZHANG Chinese Academy of Meteorological Sciences	
17:30~18:00	大气污染物与温室气体排放精细化 动态表征:进展与展望	Kebin HE Tsinghua University	
18:00~21:00	Dinner		

Parallel Session 1: Emission inventory for atmospheric pollutants and greenhouse gases

Session chairs: Qiang ZHANG, Junyu ZHENG

Conveners: Cheng HUANG, Yu ZHAO, Bo ZHENG, Zhijiong HUANG

Tim	ne: 22 September 8:30~12:00 Venue: 4	4F Jade Ballroom A		
	Moderators: Qiang ZHANG, Yu ZHAO			
Time	Title	Presenter		
8:30~8:45	Development and prospects of source apportionment techniques for air pollution	Yinchang FENG Nankai University		
8:45~9:00	Emission Factors and Source Profiles of Volatile Organic Compounds in the Petroleum Refining Industry through On-Site Measurement from Multiple Refineries	Shaodong XIE Peking University		
9:00~9:15	Ammonia Emission Mitigation Potential and Its Impact on Regional PM <sub>2.5</sub> Air Pollution	Lin ZHANG Peking University		
9:15~9:30	Satellite-based quantification of absorbing aerosol and co-emitted gas emissions from Coal-Use in China	Jason Cohen China University of Mining and Technology		
9:30~9:45	Underappreciated emission spikes and impacts on air quality during heatwaves	Lei ZHU Southern University of Science and Technology		
9:45~10:00	Assessment of Ammonia Emission Inventories Based on Multi-Site Observations	Zhijiong HUANG Jinan University		
10:00~10:15	基于车载尾气监测系统的上海集卡碳排放 量化研究	Hongdi HE Shanghai Jiao Tong University		
10:15~10:30	Tea Break			
	Moderators: Daiqi YE, Zhijiong HU	J <b>ANG</b>		
10:30~10:45	Current Status and Challenges of Establishing Cross-Media Emission Inventories: A Case Study of Mercury	Junyu ZHENG Hong Kong University of Science and Technology (Guangzhou)		
10:45~11:00	Changing sector and regional contributions to air pollution and health burden in China	Yu ZHAO Nanjing University		
11:00~11:15	Validation and Application of Atmospheric Pollutant Emission Inventories	Zhigang XUE/Na YING Chinese Research Academy of Environmental Sciences		
11:15~11:30	Rapid quantifying the emission driver of typical industry based on the real-time daily data in China	Yangxi CHU Chinese Research Academy of Environmental Sciences		
11:30~11:45	Emission characteristics of formaldehyde from residential natural gas combustion and load of electrification	Cong LIU Southeast University		

	Integrated Methodology for Compiling	Qian TANG
11:45~12:00	Greenhouse Gas and Air Pollutant Emission	Chinese Academy of
	Inventories	Environmental Planning
12:00~13:30	Lunch	

# Parallel Session 2: Advancing technologies applied in source emission measurements

Session chairs: Jianguo LIU, Jingkun JIANG

Conveners: Xiangxian LI, Tonghao LIU, Gang WANG

Time: 22 September 8:30~17:45 Venue: 4F Jade Ballroom B

### **Moderators: Jingkun JIANG**

8		
Time	Title	Presenter
8:30~8:45	Optical monitoring techniques and applications for atmospheric pollution sources	Jianguo LIU Hefei Institutes of Physical Science, CAS
8:45~9:00	PTR-MS 监测大气挥发性有机物浓度中的不确定性	Lin WANG Fudan University
9:00~9:15	Emission characteristics of hazardous air pollutants based on field measurements and emission inventory development	Hezhong TIAN Beijing Normal University
9:15~9:30	Methods and practices for determining emissions from different combustion stages of household stoves	Xinghua LI Beihang University
9:30~9:45	Enhance the supply of multi-level monitoring technologies and respond to the demand for reduction of pollution and carbon emission	Tonghao LIU China National Environmental Monitoring Centre
9:45~10:00	Research and application of pollution sources measurement based on FTIR technology	Xiangxian LI Hefei Institutes of Physical Science, CAS
10:00~10:15	Challenge analysis of ultra low emission monitoring for stationary sources	Gang WANG China University of Petroleum (East China)
10:15~10:30	Tea Break	

Moderators: Jianguo LIU			
10:30~10:45	固定源超低排放监测与质控研究	Jingkun JIANG Tsinghua University	
10:45~11:00	农村实测和实验室模拟民用生物质燃烧的单颗粒排放特征研究	Weijun LI Zhejiang University	
11:00~11:15	Characterization of full-volatility organic emissions for diesel trucks in China	Shaojun ZHANG Tsinghua University	
11:15~11:30	Characterization and Performance Grading of VOCs Emissions in the Packaging and Printing Industry	Xinmin ZHANG Chinese Research Academy of Environmental Sciences	
11:30~11:45	Characterization of organics in condensable particulate matter from stationary sources using comprehensive two-dimensional gas chromatography	Zhaojin AN Harvard University	
11:45~12:00	Study on the optical properties and emission quantification of black carbon from typical non-road mobile machinery based on real-world measurements	Bobo WU Beijing Technology and Business University	
12:00~13:30	Lunch		
	Moderators: Xiangxian LI		
13:30~13:45	第三极大气颗粒物模拟提高及来源解析	Hongliang ZHANG Fudan University	
13:45~14:00	大气污染源排放测量技术及应用	Shaofei KONG China University of Geosciences (Wuhan)	
14:00~14:15	Volatile organic compounds emission characteristics, environmental impact and health risk assessments of the petrochemical industry in the Beijing-Tianjin-Hebei region.	Zhe LV Beijing Municipal Research Institute of Eco- Environmental Protection	
14:15~14:30	Non-targeted organic aerosol fingerprint identification technology and application	Yaoqiang HUO Inner Mongolia University of Technology	
14:30~14:45	基于大数据的工业园区污染排放量大规模动态核算技术及应用	Hansen ZHAO Jiangsu Environmental Protection Group Co., Ltd	
14:45~15:00	Emission reduction technology and monitoring requirements for new generation industrial pollutants	Pengfei LI Central Research Institute of Building and	

		Construction Co., Ltd, Mcc Group
15:00~15:15	Pollution and emission characteristics of particulate matter from zinc electrolysis process	Zizhen MA Qingdao University of Technology
15:15~15:30	Tea Break	
	Moderators: Tonghao LIU	
15:30~15:45	可凝性污染物 (SO <sub>3</sub> /CPM) 测量方法研究	Yuzhong LI Shandong University
15:45~16:00	Online monitoring technology for condensable particulate matters from stationary plants under ultra-low emission requirements	Qing LI Fudan University
16:00~16:15	Ammonia and amine emissions from typical China VI diesel vehicles	Anlin LIU Sichuan University
16:15~16:30	Current situation and countermeasures for pollution source monitoring	Maohui LIU Tianjin Eco-Environmental Monitoring Center
16:30~16:45	In-situ measurement of gaseous nitrous acid (HONO) emissions from typical urban combustion sources: characteristics and influencing factors	Xiang DING Shanghai Academy of Enivronmental Sciences
16:45~17:00	Fine traceability technology for unorganized emissions of volatile organic compounds	Zehui LI Shanghai Jiao Tong University
17:00~17:15	Progress of monitoring technology for Ammonia in flue gas from pollution sources	Feng LI Shanghai Alwaysbrong Application Technology Co. Ltd.
17:15~17:30	基于无人机的交通污染立体监测研究	Hongdi HE Shanghai Jiao Tong University
17:30~17:45	Analysis of Monitoring Methods and Emission Characteristics of silt loading in Beijing	Yuncheng ZHAO Beijing Municipal Research Institute of Eco- Environmental Protection
18:00~21:00	Dinner	

Parallel Session 3: "Ground-air-space" monitoring for air pollutants and greenhouse gases

# Session chairs: Jianmin CHEN, Pinhua XIE

# Conveners: Cheng LIU, Song GUO, Renzhi HU, Guo LI, Shengrong LOU

Time: 22 September 8:30~12:00 Venue: 4F Banyan & Maple

Moderators: Song GUO, Guo LI		
Time	Title	Presenter
8:30~8:45	Optical monitoring techniques for free radicals and key precursors in the atmosphere	Pinhua XIE Hefei Institutes of Physical Science, CAS
8:45~9:00	面向降碳减污的超光谱精准遥感与人工智能 技术	Cheng LIU University of Science and Technology of China
9:00~9:15	Vertical distribution of mixing state and hygroscopicity of particulate matter on the Tibetan Plateau	Nan MA Jinan University
9:15~9:30	Characterization of atmospheric component changes at Shanghuang Observatory	Xiaole PAN Institute of Atmospheric Physics, CAS
9:30~9:45	陆源输送与海洋释放相互作用的大气复合污 染研究	Kan HUANG Fudan University
9:45~10:00	四川盆地气溶胶差异性来源成因与健康效应	Yang CHEN Chongqing Institute of Green and Intelligent Technology, CAS
10:00~10:15	Characterization and Risk Assessment of Hazardous VOCs in Hong Kong	Dasa GU Hong Kong University of Science and Technology
10:15~10:30	Tea Break	
Moderators: Pinhua XIE, Cheng LIU		
10:30~10:45	Aqueous production of sulfur-containing aerosols from nitroaromatic compounds and SO <sub>2</sub> in wintertime urban haze	Mindong CHEN Nanjing University of Information Science and Technology
10:45~11:00	Techniques and methods for detecting physical and chemical structures of the urban boundary layer	Yele SUN Institute of Atmospheric Physics, CAS

	The advancements and strategies in the	Duohong Chen
11:00~11:15	construction of Guangdong Province's	Guangdong Provincial
	coordinated monitoring network for air	<b>Ecological Environment</b>
	pollution and greenhouse gases	Monitoring Center
11:15~11:30	Determine emissions and their spatial distributions of important perfluorinated greenhouse gases in China based on atmospheric measurements from multiple sites	Minde AN Massachusetts Institute of Technology
11:30~11:45	Observations and accounting of atmospheric pollutants and greenhouse gases emission from ecosystems	Qian YU Nanjing University
11:45~12:00	基于 FTIR 光谱技术的碳污协同监测及其应用	Yusheng QIN Hefei Institutes of Physical Science, CAS
12:00~13:30	Lunch	

# Parallel Session 4: Air quality modelling and cost-benefit analysis for air pollution control

Session chairs: Shuxiao WANG, Zifa WANG

Conveners: Jianlin HU, Qi YING, Hsin-Chih LAI, David WONG, Bin ZHAO

Time: 22 September 13:30~17:30 Venue: 4F Jade Ballroom A

Moderators: Jianlin HU, Hsin-Chih LAI		
Time	Title	Presenter
13:30~13:45	Development and Application of Regional Meteorology-Chemistry Online Coupled Model WRF-GC	Zongmei FU Southern University of Science and Technology
13:45~14:00	The cost benefit analysis of electrification of mobile sources in the public domain: a start of promoting transportation structure	Qinwen TAN Chengdu Academy of Environmental Protection Sciences
14:00~14:15	How to Quantify the Impact of Aerosol on Sky Color	Jiandong WANG Nanjing University of Information Science and Technology

14:15~14:30	What is MPAS-CMAQ?	David WONG U.S. EPA
14:30~14:45	Estimating Location-Specific Health Cobenefits of CO <sub>2</sub> Mitigation Using the Adjoint of CMAQ	Amir HAKAMI Carleton University
14:45~15:00	Improved understanding of interactions between extreme weather events and air quality based on a high-resolution Earth system model	Yang GAO Ocean University of China
15:00~15:15	Co-benefit analysis of air quality management plans and public health in Taiwan	Hsin-Chih LAI Taiwan Chang Jung Christian University
15:15~15:30	Tea Break	
	Moderators: Bin ZHAO, David WC	ONG
15:30~15:45	Optimal emission control plan aiming to basically eliminate PM <sub>2.5</sub> heavy pollution in North China	Jie LI Institute of Atmospheric Physics, CAS
15:45~16:00	Emissions from Structural Fires at the Wildland-Urban Interface: From Carpets to Couches & Shingles to Studs	Shantanu JATHAR Colorado State University
16:00~16:15	Simulation and Optimization Control for Pollution and Carbon Reduction	Wenbo XUE Chinese Academy of Environmental Planning
16:15~16:30	Comparative Study on the Effectiveness and Applicability of Multi-Model Ozone Forecasting in BTHR and YRD	Bing LIU China National Environmental Monitoring Center
16:30~16:45	Simulation and Cause Analysis of Ozone Pollution in Shanghai	Qian WANG Shanghai Environmental Monitoring Center
16:45~17:00	Factors causing long-term trends in precursor emissions and ambient ozone concentrations in Japan	Chatani SATORU  National Institute for Environmental Studies
17:00~17:15	Utilizing the CMAQ Adjoint Model for Air Pollution Assessment in China	Huizhong SHEN Southern University of Science and Technology
17:15~17:30	Analysis of air pollution event days and weather patterns in Taiwan	Min-Chuan HSIAO Taiwan Chang Jung Christian University
18:00~21:00	Dinner	

# Parallel Session 5: Roadmap to synergistic control of air pollutants and carbon

Session chairs: Gang YAN, Xi LU

Conveners: Hancheng DAI, Haikun WANG, Yang OU, Yuqiang ZHANG,
Yuxuan ZHANG

Time: 22 September 13:30~17:45 Venue: 4F Jade Ballroom C

Moderators: Haikun WANG, Yuqiang ZHANG		
Time	Title	Presenter
13:30~13:45	Atmospheric reactive halogens reshaped by the clean energy policy on the North China Plain	Tao WANG The Hong Kong Polytechnic University
13:45~14:00	烟气减污降碳协同增效技术途径与费效分析	Junhua LI Tsinghua University
14:00~14:15	Neglected large impacts of sulfate on present and future methane emissions	Lu SHEN Peking University
14:15~14:30	Decarbonization will lead to more equitable air quality	Shupeng ZHU Zhejiang University
14:30~14:45	Growing but overlooked carbon and air pollutants emissions from agricultural machinery in China	Minghao ZHUANG China Agricultural University
14:45~15:00	Potentials of aspirational nitrogen interventions in improving future global air quality under climate mitigation scenarios	Yixin GUO Hong Kong University of Science and Technology (Guangzhou)
15:00~15:15	Target Setting and Pathway Optimization for Synergistic Control of Air Pollutants and Greenhouse Gases	Yueyi FENG Chinese Academy of Environmental Planning
15:15~15:30	Tea Break	
Moderators: Yuqiang ZHANG, Yuxuan ZHANG		
15:30~15:45	An Integrated Assessment Tool for Enhancing Climate Mitigation and Air Quality Improvement	Shaohui ZHANG International Institute for Applied Systems Analysis
15:45~16:00	Source attribution of carbon and air pollution and their mitigation	Guoliang SHI Nankai University
16:00~16:15	Cost-effective transition pathways for key	Dan TONG

	industries	Tsinghua University
16:15~16:30	Health co-benefits of carbon reduction in	Yang XIE/Meng XU
10:13~10:30	Northern China	Beihang University
	Carbon-neutral pathways and environmental	Ming REN
16:30~16:45	impacts in China's steel and cement industries	China University of
	impacts in China's steel and cement industries	Petroleum (Beijing)
	Study on the synergistic effects of pollutant	Yanru FANG
16:45~17:00	reduction from carbon neutrality in China's	Chinese Research
10.45/317.00	transportation sector	Academy of Environmental
	transportation sector	Sciences
17:00~17:15	Secondary pollution and its health effects in	Zhaolei ZHANG
17.00~17.13	response to urbanization	Fudan Univeristy
	芳香烃和 NOx 光反应过程中 HONO 形成新	Tianzeng CHEN
17:15~17:30		Research Center for Eco-
17.13~17.30	机制	Environmental Sciences,
	ሰ) ៤ቅ១	CAS
		Yusen DUAN
17:30~17:45		Shanghai Technology
	上海市机动车尾气排放特征及监控	Center for Reduction of
		Pollution and Carbon
		Emissions
18:00~21:00	Dinner	

# Parallel Session 6: Continuous reduction of urban $PM_{2.5}$ and ozone pollution

Session chairs: Fahe CHAI, Qingyan FU

Conveners: Peter LOUIE, Jingnan HU, Miao NING, Dan Dan HUANG

Time: 22 September 13:30~18:30 Venue: 4F Banyan & Maple

#### Moderators: Qingyan FU, Peter LOUIE Time **Title** Presenter Inter-Comparison of Measured and Modeled Min SHAO 13:30~13:45 Ozone Production Rates Jinan University Peter LOUIE Preliminary analysis of greenhouse gases in 13:45~14:00 Hong Kong Environmental Hong Kong **Protection Department** 14:00~14:15 New ideas of environmental air quality Shuncheng LI

	research in the era of big data	Hong Kong University of Science and Technology (Guangzhou)
14:15~14:30	The Current Challenges in Developing Aircraft-Based Measurements of Air Pollutants and Greenhouse Gases in China	Zhijun WU Peking University
14:30~14:45	Research on the Characterization, and Prevention and Control Practice of PM <sub>2.5</sub> and Ozone Pollution in Hubei Province under Different Weather Types	Wei LIU Hubei Provincial Academy of Eco-Environmental Sciences
14:45~15:00	Integrated Analysis of Air Quality-Vegetation- Health Effects of Future Air Pollution Control Strategies: A case study of ZiBo	Li LI Shanghai University
15:00~15:15	Research on the co-benefits of pollution reduction and carbon reduction in the field of urban road transportation in Sichuan Province	Yuan LI Sichuan Academy of Eco- Environmental Sciences
15:15~15:30	Tea Break	
	Moderators: Miao NING, Dandan HU	JANG
15:30~15:45	The Role of Anthropogenic Monoterpenes in Ozone Formation in a Chinese Megacity	Xuemei WANG Jinan University
15:45~16:00	环杭州湾地区排放因子特征研究	Qingyan FU Shanghai Academy of Environmental Sciences
16:00~16:15	Synergistic Strategies for Air Pollution and Climate Change in California	Dongmin LUO California Air Resources Board
16:15~16:30	The observation of ozone formation and short- term transportation in north bank area of Hangzhou Bay	Guangli XIU East China University of Science and Technology
16:30~16:45	Fast identification of high emitter for mobile source emission and roadside air quality management	Ning ZHI Hong Kong University of Science and Technology
16:45~17:00	Trend and evolution of surface O <sub>3</sub> and O <sub>3</sub> -precursor relationship in Hong Kong and China	Zhe WANG Hong Kong University of Science and Technology
17:00~17:15	Sources of organic aerosol in wintertime Shanghai based on online molecular composition	Defeng ZHAO Fudan University
17:15~17:30	Source analysis of atmospheric VOCs and the mechanisms of ozone formation in steelmaking regions	Jinping CHENG Shanghai Jiao Tong University
17:30~17:45	Drivers of Increasing Ozone during the Two Phases of Clean Air Actions in China 2013-	Yuxi LIU Chinese Academy of

	2020	Environmental Panning
17:45~18:00	Study on ozone formation sensitivity and pollution control in Southern Sichuan Province	Li HAN Sichuan Academy of Eco- Environmental Sciences
18:00~18:15	Temporal Variations of Surface Ozone and NOx from Tropical Urban of Sarawak,  Malaysia	Hartini Mahidin Universiti Kebangsaan Malaysia
18:15~18:30	Airvoice company (UAE, USA): high-density platforms for monitoring and forecasting air quality in the city and region	Slava Lapachev SityAir Co.
18:30~21:00	Dinner	

# Parallel Session 7: Atmospheric environment and health

Session chairs: Haidong KAN, Taicheng AN

Conveners: Qing LI, Yingjun LIU, Jianwei GU

Time: 22 September 8:30~12:29 Venue: 4F Boardroom

Moderators: Taicheng AN, Qing LI		
Time	Title	Presenter
8:30~8:45	Identification and assessment of environmental	Shunqing XU
8:45~9:00	health risks  Toxicity effects and health risks posed by emerging flame retardant pollutants	Hainan University Hui LI Shanghai University
9:00~9:15	Identifying low-concentration yet high-potency toxic components in PM <sub>2.5</sub>	Ling JIN The Hong Kong Polytechnic University
9:15~9:30	Study on the oxidative potential characteristics of mineral aerosol	Qingcai CHEN Shaanxi University of Science & Technology
9:30~9:42	Toxicological effects of atmospheric particulate matters and associated emerging contaminants on human lung cells	Xiaosan LUO Nanjing University of Information Science and Technology
9:42~9:54	The Developmental Toxicity Targets and Mechanisms of Airborne Pollutants Exposure	Huifeng YUE Shanxi University
9:54~10:06	Internal and external exposure of heavy metals and PAHs in size-resolved PMs from household solid fuel combustion source	Hongmei XU Xi'an Jiaotong University

10:06~10:20	Tea Break	
Moderators: Yingjun LIU, Jianwei GU		
10:20~10:35	Systematic Assessment of Health Effects Induced by Exposure to Airborne PM <sub>2.5</sub> Water- Soluble Inorganic Ions	Ke HAO Tongji University
10:35~10:50	Atmospheric aging on soot particles and the potential health effects	Jing SHANG Peking University
10:50~11:05	Cardiovascular effects of indoor ozone chemistry: Preliminary results from a panel study in Lhasa	Yingjun LIU Peking University
11:05~11:17	Evaluating the Impact of Climate Change on Heat Waves and Pollution Exposure: A Comprehensive Health and Economic Risk Assessment	Shupeng ZHU Zhejiang University
11:17~11:29	Effects of Aerosol acidity on low birthweight: a preliminary study	Bin HAN Chinese Research Academy of Environmental Sciences
11:29~11:41	Toxicological mechanisms of ambient PM <sub>2.5</sub> -induced abnormal cardiovascular metabolism	Yanyi XU Fudan University
11:41~11:53	Environmental processes of bioaerosol and its associated health effects	Fangxia SHEN Beihang University
11:53~12:05	Alzheimer-like changes and related mechanisms in SH-SY5Y cells promoted by ultrafine black carbon	Yu SHANG Shanghai University
12:05~12:17	Multi-organ toxicity caused by PM <sub>2.5</sub> in elderly with cardiovascular diseases: the role of PAHs played in the most polluted episodes in Xi'an	Jian SUN Xi'an Jiaotong University
12:17~12:29	Health Risk Assessment of Atmospheric Fine Particulate Matter Based on Systems Toxicology	Zhenglu WANG West China Hospital of Sichuan University
12:30~13:30	Lunch	

Parallel Session 8: Big data and artificial intelligence technology in the atmospheric environment

Session chairs: Dabo GUAN, Jianjun LI

Conveners: Yun ZHU, Jian GAO, Zhen CHENG, Yu ZHAN

T	ime: 22 September 13:30~17:45 Venue	: 4F Boardroom
Moderators: Dabo GUAN, Zhen CHENG		
Time	Title	Presenter
13:30~13:45	Advancing Air Quality Management and research through AI application	Yun ZHU South China University of Technology
13:45~14:00	Preliminary Exploration of AI Teaching Engines in Environmental Science: A Case Study on Atmospheric Environment	Nan LI Tsinghua University
14:00~14:15	Chemical transport model emulation based on Fourier Neural Operator	Zhen CHENG Shanghai Jiao Tong University
14:15~14:30	Global scale atmospheric pollution parameter inversion and reconstruction with machine learning	Qiangqiang YUAN Wuhan University
14:30~14:45	Addressing concept drift in spatiotemporal machine learning models	Yu ZHAN Sichuan University
14:45~15:00	Understanding the Key Nonlinear Issues of Atmospheric Compound Pollution and Their Impact on Machine Learning Methods	Kai SHI China West Normal University
15:00~15:15	MYATMOS: novel method to analyzed big data with stochastic and an artificial intelligent approach	Zaitun Yahaya NOOR The Clean Air Forum Society of Malaysia
15:15~15:30	Tea Break	
	Moderators: Jianjun LI, Yun ZH	U
15:30~15:45	An Intelligent Data-Driven Method for Environmental Management	Guangfei YANG Dalian University of Technology
15:45~16:00	Life Cycle Carbon Footprint and Electric Carbon Coupling Technology	Shangheng YAO Energy Development Research Institute of China Southern Power Grid
16:00~16:15	Exploring Changes in Urban Isoprene and Its Impact under the Background of Climate Warming Using Machine Learning	Nan WANG Sichuan University
16:15~16:30	Seamless estimation of ozone concentrations using a multisource data deep learning fusion framework	Tongwen LI Sun Yat-Sen University
16:30~16:45	Research progress and some key issues about data-driven air pollution remote sensing	Zongwei MA Nanjing University
16:45~17:00	Spatiotemporal Seamless Intelligent Sensing of	Ke GUI

	Surface Visibility and Particulate Matter	Chinese Academy of	
	Concentrations in China and Their Application	Meteorological Sciences	
17:00~17:15	Prediction and Cause Analysis of Regional	Song GAO	
17.00 17.12	Ozone Pollution Based on Deep Learning	Shanghai University	
	Multiscale Temporal Variations of Atmospheric	Ly Sy Phu NGUYEN	
17:15~17:30	Mercury Distinguished by the Hilbert-Huang	VNUHCM-University of	
17.13~17.30	Transform Analysis Reveals Multiple El Niño-	Science	
	Southern Oscillation Links	Science	
		Yuanyi HUANG	
	<b>Exploring Construction Solutions for</b>	South China University of	
17:30~17:45	Intelligent Agent Systems in the Ecological	Technology/Cloud &	
	Environment Domain: A Case Study of Nexus	Information (Guangdong)	
	AI	Eco-Environment Science	
		and Technology., LTD.	
18:00~21:00	Dinner		

# Parallel Session 9: Atmospheric haze chemistry

Session chairs: Hong HE, Maofa GE

Conveners: Chuncheng CHEN, Weigang WANG, Biwu CHU, Qingru WU,
Guangjie ZHENG

Time: 22 September 8:30~12:00 Venue: 4F Jade Ballroom C

Moderators: Chuncheng CHEN, Qingru WU				
Time	Title	Presenter		
8:30~8:45	Research progress on interface reaction mechanism in atmospheric haze chemistry	Qingxin MA Research Center for Eco- Environmental Sciences, CAS		
8:45~9:00	Simulation techniques for laboratory investigation of atmospheric haze chemistry	Lin DU Shandong University		
9:00~9:15	Mass Spectrometry at the Air-water Interface	Xinxing ZHANG Nankai University		
9:15~9:30	Enhanced Ozone Oxidation Pathway to Sulfate aerosols in East Asia after China's $SO_2$ Emission Control: direct evidence from $\Delta^{17}O$	Yanlin ZHANG Nanjing University of Information Science and Technology		
9:30~9:45	Surface-area dependence of sulfur (IV)	Pai LIU		

9:45~10:00	oxidation rate in aerosol microdroplets  Multiphase Buffering by Ammonia Sustains Sulfate Production in Atmospheric Aerosols	Beijing Institute of Technology Guangjie ZHENG Tsinghua University
10:00~10:15	Divergent Impacts of Biomass Burning and Fossil Fuel Combustion Aerosols on Fog- Cloud Microphysics and Chemistry: Novel Insights From Advanced Aerosol-Fog Sampling	Ye KUANG Jinan University
10:15~10:30	Tea Break	
	Moderators: Weigang WANG, Guangjie	ZHENG
10:30~10:45	Formation and aging of nitrogen-containing organic aerosol	Rujin HUANG Institute of Earth Environment, CAS
10:45~11:00	The mechanism of new particle formation induced by iodic acid	Xiuhui ZHANG Beijing Institute of Technology
11:00~11:15	Formation and Synergistic Joint Control Strategies for PM <sub>2.5</sub> and Ozone Pollution from the Atmospheric Oxidation Perspective	Keding LU Peking University
11:15~11:30	Impact of Biogenic VOCs on Secondary Organic Aerosol Formation from PAHs oxidation	Song GUO Peking University
11:30~11:45	Nocturnal Atmospheric Synergistic Oxidation Reduces the Formation of Low-volatility Organic Compounds from Biogenic Emissions	Yue ZHAO Shanghai Jiao Tong University
11:45~12:00	Modeling the formation and aging process of secondary organic aerosols from two typical megacities of China: results with new observational constraints	Weiwei HU Guangzhou Institute of Geochemistry, CAS
12:00~13:30	Lunch	

ABaCAS Training Workshop					
Time: 20 September 9:00~17:35 Venue: 4F Banyan & Maple					
Chair: Yun ZHU					
Time	Time Title Presenter				
9:00~9:05	Welcome Remarks	Qingyan FU Shanghai Academy of			

9:05~9:55 名			Environmental Sciences	
9:05-9:55空气污染控制成本效益与达标评估系统 (ABaCAS) 概述、进展及应用Zhicheng ZHANG Tsinghua University/ South China University of Technology9:55~10:25ABaCAS 主要功能及人工智能应用趋势Yun ZHU South China University of Technology10:25~10:40Tea Break10:40~11:10ABaCAS 长三角案例介绍Jingyu AN Shanghai Academy of Environmental Sciences11:10~12:00ABaCAS-EI 排放清单介绍Haotian ZHENG/Shengyue LI Nanjing University/ Tsinghua University12:00~14:00Lunch空气质量对排放控制的实时响应原理及工 身(RSM-VAT) 操作培训Zhaoxin DONG/Jinying LI Tsinghua University of Technology15:15~15:45CE) 概述、演示及功能操作培训Shaoyi WANG South China University of Technology15:45~16:00Tea Break16:00~16:35季電污染物空气质量规划工具(Nexus) 概 、演示及功能操作培训Shicheng LONG South China University of Technology16:35~17:05查气质量达标评估工具(SMAT-CE) 概 、演示及功能操作培训Mengmeng ZHANG South China University of Technology17:05~17:35Discussions				
Singhua University/ South China University of Technology Yun ZHU South China University of Technology Yun ZHU South China University of Technology 10:25~10:40	9:05~9:55	空气污染控制成木效益与达标评估系统		
(ABaCAS) 概述、进展及应用  China University of Technology Yun ZHU South China University of Technology 10:25~10:40  Tea Break  10:40~11:10  ABaCAS 长三角案例介绍  ABaCAS 长三角案例介绍  ABaCAS-EI 排放清单介绍  Ten Break  Ingyu AN Shanghai Academy of Environmental Sciences Haotian ZHENG/Shengyue LI Nanjing University/ Tsinghua University  Eq. (RSM-VAT) 操作培训  大气污染动态源贡献分析工具(FAST-CE)概述、演示及功能操作培训  Shaoyi WANG South China University of Technology  Technology  Shaoyi WANG South China University of Technology  Shaoyi WANG South China University of Technology  Technology  Fellow-16:35  ABaCAS 主要功能及人工智能应用趋势  Jingyu AN Shanghai Academy of Environmental Sciences  Haotian ZHENG/Shengyue LI Nanjing University/ Tsinghua University/ South China University of Technology  Shaoyi WANG South China University of Technology  Shicheng LONG South China University of Technology  Ped 质量达标评估工具(SMAT-CE)概  Mengmeng ZHANG South China University of Technology  Technology  Discussions		工 机2水压的松木双皿马及协作旧水约	_	
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Singu AN			•	
Technology				
Technology	9:55~10:25	ABaCAS 主要功能及人工智能应用趋势	South China University of	
10:25~10:40 10:40~11:10 ABaCAS 长三角案例介绍 Shanghai Academy of Environmental Sciences Haotian ZHENG/Shengyue LI Nanjing University/ Tsinghua University/ Tsinghua University/ Tsinghua University Of Technology  12:00~14:00  14:00~15:15  空气质量对排放控制的实时响应原理及工 具 (RSM-VAT) 操作培训  大气污染动态源贡献分析工具 (FAST-CE) 概述、演示及功能操作培训  「在Break  多重污染物空气质量规划工具 (Nexus) 概 Shicheng LONG South China University of Technology  16:35~17:05  空气质量达标评估工具 (SMAT-CE) 概 Mengmeng ZHANG South China University of Technology  17:05~17:35 Discussions			Technology	
10:40~11:10 ABaCAS 长三角案例介绍 Shanghai Academy of Environmental Sciences Haotian ZHENG/Shengyue LI Nanjing University/ Tsinghua University/ Tsinghua University/ Tsinghua University/ Tsinghua University/ Tsinghua University Of Technology	10:25~10:40	Tea Break		
10:40~11:10 ABaCAS 长三角案例介绍 Shanghai Academy of Environmental Sciences Haotian ZHENG/Shengyue LI Nanjing University/ Tsinghua University/ Tsinghua University/ Tsinghua University/ Tsinghua University/ Tsinghua University Of Technology			Jingyu AN	
Haotian ZHENG/Shengyue LI Nanjing University/ Tsinghua University of Technology  大气污染动态源贡献分析工具(FAST- CE)概述、演示及功能操作培训  「Environmental Sciences Haotian ZHENG/Shengyue LI Nanjing University/ Tsinghua University China University of Technology  大气污染动态源贡献分析工具(FAST- Shaoyi WANG South China University of Technology  「Technology  「Technology  「基本のででは、演示及功能操作培训 「Passanta Angual Control Contr	10:40~11:10	ABaCAS 长三角案例介绍	•	
11:10~12:00ABaCAS-EI 排放清单介绍LI Nanjing University/ Tsinghua University/ Tsinghua University/ Tsinghua University/ Tsinghua University/ Tsinghua University/ South China University/ South China University of Technology15:15~15:45大气污染动态源贡献分析工具(FAST- CE)概述、演示及功能操作培训Shaoyi WANG South China University of Technology15:45~16:00Tea Break8多重污染物空气质量规划工具(Nexus)概 述、演示及功能操作培训Shicheng LONG South China University of Technology16:35~17:05空气质量达标评估工具(SMAT-CE)概 述、演示及功能操作培训Mengmeng ZHANG South China University of Technology17:05~17:35Discussions			Environmental Sciences	
11:10~12:00 ABaCAS-EI 排放清单介绍 Nanjing University/ Tsinghua University/ South China University of Technology 大气污染动态源贡献分析工具(FAST-CE) 概述、演示及功能操作培训 Shaoyi WANG South China University of Technology Tea Break    16:00~16:35   多重污染物空气质量规划工具(Nexus)概 Shicheng LONG South China University of Technology			Haotian ZHENG/Shengyue	
12:00~14:00   Lunch   空气质量对排放控制的实时响应原理及工   Zhaoxin DONG/Jinying LI Tsinghua University South China University of Technology   大气污染动态源贡献分析工具(FAST-CE)概述、演示及功能操作培训   Shaoyi WANG South China University of Technology   15:45~16:00   Tea Break   Shickeng LONG South China University of Technology   空气质量达标评估工具(SMAT-CE)概   Mengmeng ZHANG South China University of Technology   で気が表現では、演示及功能操作培训   Technology   で気が表現では、対象の対象を表現である。	11:10-12:00	ADaCAS EI 址於害的介绍	LI	
12:00~14:00Lunch14:00~15:15空气质量对排放控制的实时响应原理及工 具 (RSM-VAT) 操作培训Zhaoxin DONG/Jinying LI Tsinghua University/ South China University of Technology15:15~15:45大气污染动态源贡献分析工具 (FAST- CE) 概述、演示及功能操作培训Shaoyi WANG South China University of Technology15:45~16:00Tea Break16:00~16:35多重污染物空气质量规划工具 (Nexus) 概 、演示及功能操作培训Shicheng LONG South China University of Technology16:35~17:05空气质量达标评估工具 (SMAT-CE) 概 、演示及功能操作培训Mengmeng ZHANG South China University of Technology17:05~17:35Discussions	11.10~12.00	ADaCAS-EI 开以用中川归	Nanjing University/	
空气质量对排放控制的实时响应原理及工 Zhaoxin DONG/Jinying LI Tsinghua University/ South China University of Technology  大气污染动态源贡献分析工具(FAST-Shaoyi WANG South China University of Technology  15:45~16:00			Tsinghua University	
14:00~15:15 具 (RSM-VAT) 操作培训 Tsinghua University/ South China University of Technology  大气污染动态源贡献分析工具 (FAST-Subtraction of Technology)  15:15~15:45	12:00~14:00	Lunch		
14:00~15:15  具 (RSM-VAT) 操作培训  大气污染动态源贡献分析工具 (FAST-Shaoyi WANG South China University of Technology  大气污染动态源贡献分析工具 (FAST-State Shaoyi WANG South China University of Technology  15:45~16:00  Tea Break  多重污染物空气质量规划工具 (Nexus) 概 Shicheng LONG South China University of Technology  立法、演示及功能操作培训  空气质量达标评估工具 (SMAT-CE) 概 Mengmeng ZHANG South China University of Technology  16:35~17:05  Discussions		空气质量对排放控制的空时响应原理及工	•	
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大气污染动态源贡献分析工具(FAST-Shaoyi WANG South China University of Technology  15:45~16:00  Tea Break  多重污染物空气质量规划工具(Nexus)概 Shicheng LONG South China University of Technology  並、演示及功能操作培训 South China University of Technology  空气质量达标评估工具(SMAT-CE)概 Mengmeng ZHANG South China University of Technology  16:35~17:05  Discussions		具(RSM-VAT)操作培训		
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Technology  15:45~16:00  Tea Break  多重污染物空气质量规划工具(Nexus)概  Shicheng LONG South China University of Technology  空气质量达标评估工具(SMAT-CE)概  Mengmeng ZHANG South China University of Technology  立法、演示及功能操作培训  16:35~17:05  Discussions		大气污染动态源贡献分析工具 (FAST-	Shaoyi WANG	
15:45~16:00 Tea Break    多重汚染物空气质量规划工具(Nexus)概 Shicheng LONG South China University of Technology	15:15~15:45		South China University of	
多重污染物空气质量规划工具(Nexus)概 Shicheng LONG South China University of Technology  立て、演示及功能操作培训 Mengmeng ZHANG South China University of Technology  立て、演示及功能操作培训 Mengmeng ZHANG South China University of Technology  17:05~17:35 Discussions		CE) 概述、演示及功能操作培训	Technology	
16:00~16:35South China University of Technology16:35~17:05空气质量达标评估工具 (SMAT-CE) 概 South China University of South China University of Technology17:05~17:35Discussions	15:45~16:00	Tea Break		
16:00~16:35South China University of Technology16:35~17:05空气质量达标评估工具 (SMAT-CE) 概 South China University of South China University of Technology17:05~17:35Discussions		多重污染物空气质量抑制工具 (Nevus) 椰	Shicheng LONG	
述、演示及功能操作培训 Technology  空气质量达标评估工具 (SMAT-CE) 概 Mengmeng ZHANG South China University of Technology  17:05~17:35 Discussions	16:00~16:35	ン主リ不同工 W火里が松工会 (Itexus) W		
16:35~17:05South China University of Technology17:05~17:35Discussions	10.00 -10.55	述、演示及功能操作培训	•	
16:35~17:05South China University of Technology17:05~17:35Discussions				
述、演示及功能操作培训 Technology 17:05~17:35 Discussions	16:35~17:05	空气质量达标评估工具(SMAT-CE)概		
17:05~17:35 Discussions		/노 〈늗 ㅡ ᅲ 샤샤ㅂ /ㄴ (ㅗ /!!	•	
		还、	Technology	
19.00 21.00 Diagram	17:05~17:35	Discussions		
18:00~21:00 Dinner	18:00~21:00	Dinner		

# Youth Forum: Oral

# Moderators: Hongliang ZHANG, Shuhui ZHU Time: 21 September 19:00~22:05 Venue: 4F Banyan & Maple Title Presenter Publishing with the Environmental Science Grace Thobu

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Time	Title	Presenter	
19:00~19:15	Publishing with the Environmental Science journals of the Royal Society of Chemistry	Grace Thoburn Royal Society of Chemistry	
19:15~19:25	空气质量监测系统数智化运维建设方案探 讨	Xiangdong WANG ORiEL	
19:25~19:35	Modelling of the Impact of Marine Chlorine Emissions on Secondary Organic Aerosols over the North China Plain	Zhaoqi GAO Shandong University	
19:35~19:45	The Nexus of International Trade and Green Energy Integration: Shaping Emission Pathways in China's Aluminum Cycle	Shuting JIA North China Electric Power University	
19:45~19:55	Joint effect of short-term exposure to fine particulate matter and ozone on mortality: A time series study in 272 Chinese cities	Yixuan JIANG Fudan University	
19:55~20:05	Greenhouse Gas and Organic Volatile Gas Emissions from China's Oil and Gas Supply Chain	Jia LIU Tsinghua University	
20:05~20:15	Regional Meteorological Feature Extraction Enhances Deep Learning for Extended 120- hour PM <sub>2.5</sub> Forecasting	Xinyi LIU Sichuan University	
20:15~20:25	A Featured-Species-Based Inverse Dispersion Method for Estimating Emission Intensities of Volatile Organic Compounds in the Chemical Industry	Yanjun LIU Nanjing University	
20:25~20:35	Public Perception and Official Data Discrepancies Regarding Air Quality Improvement in China in the Past Decade	Danyue ZHAO Shanghai Jiao Tong University	
20:35~20:45	Long-term variation and influencing factors of hydroxy methyl sulfonate (HMS) in winter in Beijing	Tao MA Guangdong University of Technology	
20:45~20:55	Towards a Holistic Understanding of New Particle Formation in China	Jiewen SHEN Tsinghua University	
20:55~21:05	An ensemble machine learning model to enhance extrapolation ability of predicting coarse particulate matter with high resolutions in China	Su SHI Fudan University	
21:05~21:15	酸度通过促进金属溶解驱动大气颗粒物毒	Xiwen SONG Fudan University	

	性效应改变				
21:15~21:25	A review of machine learning for modeling air quality: Overlooked but important issues	Die TANG Sichuan University			
21:25~21:35	Spatiotemporal Evolution of CFCs-HCFCs-HFCs Emissions from China's Refrigeration Industry Driven by Domestic Demand and Exportation	Siheng XU North China Electric Power University			
21:35~21:45	Long-term variability in black carbon emissions constrained by gap-filled absorption aerosol optical depth and associated premature mortality in China	Wenxin ZHAO Nanjing University			
21:45~21:55	Enhanced heterogeneous decomposition of inorganic nitrogen compounds on deliquesced aerosol particles	Haotian ZHENG Nanjing University			
21:55~22:05	Multi-media Flows and Emissions of Hazardous Trace Elements in China's Coal System	Yanghao LIU North China Electric Power University			
	Poster Session				
Time:	21 September 19:00~21:55 Venue: 4F Nex	t to Banyan & Maple			
		Presenter			
ID	Title	Presenter			
1 <b>D</b>	Title  A Study on the Development of an Equation for the Transition Value of the Photochemical Indicator O <sub>3</sub> /NO <sub>Y</sub>	Presenter  Chang-You TSAI  Taiwan Yunlin University of Science and Technology			
	A Study on the Development of an Equation for the Transition Value of the Photochemical Indicator O <sub>3</sub> /NO <sub>Y</sub> Predicting ozone episodes in China in the	Chang-You TSAI Taiwan Yunlin University of			
1	A Study on the Development of an Equation for the Transition Value of the Photochemical Indicator O <sub>3</sub> /NO <sub>Y</sub>	Chang-You TSAI Taiwan Yunlin University of Science and Technology Fengwei WAN			
2	A Study on the Development of an Equation for the Transition Value of the Photochemical Indicator O <sub>3</sub> /NO <sub>Y</sub> Predicting ozone episodes in China in the 2050s using extreme value models  Improving WRF-CMAQ Air Quality Prediction Accuracy Through Machine	Chang-You TSAI Taiwan Yunlin University of Science and Technology Fengwei WAN Peking University Chien-Hung Chen Taiwan Yunlin University of			
2 3	A Study on the Development of an Equation for the Transition Value of the Photochemical Indicator O <sub>3</sub> /NO <sub>Y</sub> Predicting ozone episodes in China in the 2050s using extreme value models  Improving WRF-CMAQ Air Quality Prediction Accuracy Through Machine Learning Techniques  Analysis of the Source Characteristics of Volatile Organic Compounds in Typical Industries in Southwest China  Global wildfire emissions of full-volatility	Chang-You TSAI Taiwan Yunlin University of Science and Technology Fengwei WAN Peking University Chien-Hung Chen Taiwan Yunlin University of Science and Technology  Xiao HU Fujian Normal University Lvyin HUANG			
1 2 3	A Study on the Development of an Equation for the Transition Value of the Photochemical Indicator O <sub>3</sub> /NO <sub>Y</sub> Predicting ozone episodes in China in the 2050s using extreme value models  Improving WRF-CMAQ Air Quality Prediction Accuracy Through Machine Learning Techniques  Analysis of the Source Characteristics of Volatile Organic Compounds in Typical Industries in Southwest China	Chang-You TSAI Taiwan Yunlin University of Science and Technology Fengwei WAN Peking University Chien-Hung Chen Taiwan Yunlin University of Science and Technology  Xiao HU Fujian Normal University			
1 2 3 4 5	A Study on the Development of an Equation for the Transition Value of the Photochemical Indicator O <sub>3</sub> /NO <sub>Y</sub> Predicting ozone episodes in China in the 2050s using extreme value models  Improving WRF-CMAQ Air Quality Prediction Accuracy Through Machine Learning Techniques  Analysis of the Source Characteristics of Volatile Organic Compounds in Typical Industries in Southwest China  Global wildfire emissions of full-volatility organic compounds from 1997 to 2023  Integrated Benefits of Synergistically Reducing Air Pollutants and Carbon Dioxide	Chang-You TSAI Taiwan Yunlin University of Science and Technology Fengwei WAN Peking University Chien-Hung Chen Taiwan Yunlin University of Science and Technology  Xiao HU Fujian Normal University  Lvyin HUANG Tsinghua University  Shengyue LI			

	a Polluted Atmosphere		
9	Synoptic controls on warm-season O <sub>3</sub>	Zhiheng LIAO	
	pollution in eastern China: a focus on O <sub>3</sub> -	Institute of Urban	
	NOx-VOC chemistry	Meteorology, CMA, Beijing	
10	Comparative Study on VOC Emission Inventory of Typical Petrochemical Enterprises in Fujian and Emission Reduction Potentials	Yuehua LIU Fujian Normal University	
11	Potential Benefits Evaluation of PM <sub>2.5</sub> Control Measures: A Case Study in Taiwan	Shi-Jie NIEH Taiwan Industrial Technology Research Institute	
12	A Case Study on Methodological Approaches for Integrating CMAQ Data and AI Models	Yung-Chen YAO Taiwan Industrial Technology Research Institute	
13	Response of organic aerosol in Beijing to emission reductions: Blue Winter Olympics vs. Gray Lockdown Haze	Qipeng QU Tsinghua University	
14	High Spatial Resolution Anthropogenic Air Pollutants and Carbon Dioxide Emission Inventory in China in 2020	Zhezhe SHI Tsinghua University	
15	Development of a nonlinear response surface model linking point source emissions to PM <sub>2.5</sub> concentrations	Qian SONG Tsinghua University	
16	Gestational Exposure to Air Pollution and PM <sub>2.5</sub> Constituents Impair Intrauterine Fetal Growth Trajectory	Pengbo ZHAO Tongji University	

# Registration

For participants, please register for the conference through the conference website (https://www.abacas-dss.com/Conference/2024/) before September  $19^{th}$ , or register onsite at the conference venue on September  $20^{th}$ .

Participants	Early bird registration before July 31st	Full registration  August 1 <sup>st</sup> ~September 20 <sup>th</sup>	
Current	CNY 1000	CNY 1200	
Non-students	CNY 1800	CNY 2000	

### Payment method:

The conference committee entrusts "Shanghai Association of Environmental Protection Industry" to collect the registration fee and issue an invoice. In order to reduce the waiting time at the reporting site, participants are requested to pay the registration fee by scanning the QR code or bank transfer to the following account provided by ICBC Bank:

### 1. QR code:



#### 2. Bank transfer:

(1) **For domestic participants,** you can transfer the conference registration fee by transferring to the bank account of Shanghai Association of Environmental Protection Industry.

账户名称:上海市环境保护产业协会银行账号:1001271509014462105开户银行:中国工商银行徐汇华山路支行

(2) **For international participants**, you can transfer the conference registration fee by transferring to the bank account of Shanghai Association of Environmental Protection Industry.

Account Name: Shanghai Association of Environmental Protection Industry Association Address: Suite 17, No. 278, Wu Xing Road, Shanghai, China

Account number: 1001 2715 0901 4462 105

SWIFTBIC: ICBKCNBJSHI

Account bank: Industrial and Commercial bank of CHINA Shanghai branch

Bank Address: #1065 Zhao Jia Bang road, Shanghai, China

#### **NOTES:**

- (1) For the above two payment methods, please write "ABaCAS+ your abbreviation + your name" in the transfer notes, otherwise the Organizing committee will not be able to confirm your transfer information.
- (2) After the transfer/remittance, please send your personal information, transfer/remittance voucher and invoice information to scapc@mail.tsinghua.edu.cn as soon as possible. The conference team will send your electronic invoice to your email address.
- (3) **Cancellation:** Cancellation before September 1<sup>st</sup>, 2024 will be subject to a 20% fee. Cancellations will not be accepted after September 1<sup>st</sup>, 2024, but replacement of participants will be allowed. If you need to cancel or replace the participant, please send the cancellation request and replacement request to scape@mail.tsinghua.edu.cn.

## **Special Issue**

The conference will feature a special issue in collaboration with *Environmental Science: Atmospheres*, dedicated to the **International Conference on Air Benefit and** 

Cost and Attainment Assessment (ABaCAS) 2024. This special issue will encompass a broad range of topics, reflecting the diverse and cutting-edge research presented at the conference. We invite all researchers who present their work at ABaCAS 2024 to submit their papers for consideration in this special issue.

### Theme:

Special issue dedicated to the International Conference on Air Benefit and Cost and Attainment Assessment (ABaCAS) 2024

### **Focus Aereas:**

- 1. Emission inventory for atmospheric pollutants and greenhouse gases
- 2. Advancing technologies applied in source emission measurements
- 3. "Ground-air-space" monitoring for air pollutants and greenhouse gases
- 4. Air quality modelling and cost-benefit analysis for air pollution control
- 5. Roadmap to synergistic control of air pollutants and carbon
- 6. Urban air pollution control
- 7. Atmospheric environment and health
- 8. Big data and artificial intelligence in the atmospheric environment
- 9. Atmospheric haze chemistry

#### **Guest Editors:**

Hongliang ZHANG, Fudan University Song GUO, Peking University Biwu CHU, Research Center for Eco-Environmental Sciences, CAS Bo ZHENG, Tsinghua University

#### Website:

https://blogs.rsc.org/ea/2024/08/08/special-issue-dedicated-to-the-international-conference-on-air-benefit-and-cost-and-attainment-assessment-abacas-2024/

# **Abstract Reception and Outstanding Youth Report**

### **Awards**

The abstract submission has been closed. The notification of acceptance and the information of poster session have been notified by Email. Please check the mail. The conference will select 10 Outstanding Youth Report Awards based on merit.

### **Hotel and Accommodation**

The conference venue will be the Longemont Shanghai Hotel, 1116 West Yan'an Road, Shanghai, China. Participants can book hotel rooms in the conference venue or nearby hotels by the following means. Please contact the conference affairs team (Wenxin ZHOU, Tel: 86-13761333378) for any inquiries.

Hotel	Address	Room prices	Reservation
Longemont Shanghai Hotel (conference venue)	1116 West Yan'an Road	Deluxe Room (1 queen bed): ¥600 /room/night (Includes 1 breakfast)*  VIP Room (2 double beds): ¥700 /room/night (Includes 2 breakfasts)*  Executive Suite (1 queen bed): ¥1500 /room/night (Includes 2 breakfasts)*	
Hanting Youjia Hotel (Shanghai Zhongshan Gongyuan Yan'an Road)	No.1 Panyu Road, Yan'an West Road, Changning District, Shanghai (~150 meters away from the conference venue)	¥ 350~500 /room/night**	
Ji Hotel (Shanghai Yan'an Road)	No.1066 Yan'an West Road, Changning District, Shanghai (~200 meters away from the conference venue)	¥ 600~800 /room/night**	You can make a reservation on the website
Jinjiang Metropolo Classiq Jing'An Hotel	No. 918 Yan'an West Road, Changning District, Shanghai (~400 meters away from the conference venue)	¥ 500~700 /room/night**	

<sup>\*</sup> The room prices at the Longemont Shanghai Hotel are discounted for conference participants. Please book and pay for your room through the QR code provided or the following web link: http://www.imm-cloud.com:8080/webroom.html?id=ASS0921

<sup>\*\*</sup> The room prices of other hotels may fluctuate according to the market condition. We suggest you make a reservation as early as possible.

# Languages

Chinese/English

# **Conference Contact**

Conference Email: <a href="mailto:scape@tsinghua.edu.cn">scape@tsinghua.edu.cn</a>

Hongli WANG Tel: 86-021-64085119-2823

Email: wanghl@saes.sh.cn

Dandan HUANG Tel: 86-021-64085119-2811

Email: huangdd@saes.sh.cn

Shuhui ZHU Tel: 86-13671939634

Email: zhush@saes.sh.cn

Qing LI Tel: 86-021-31248901

Email: qli@fudan.edu.cn

For sponsorship inquiries, please contact Lin at 13917083064.