

International Seminar on Remote Sensing Monitoring of Air Pollution and Carbon Emissions

中国矿业大学空气污染和碳排放遥感监测国际研讨会

组织单位 Organizer

School of Environment and Surveying, China University of Mining and Technology

中国矿业大学环境与测绘学院

International Exchange and Cooperation Office of China University of Mining and Technology 中国矿业大学国际交流合作处

项目资助 Project Funding

本会议得到中国矿业大学高等学校学科创新引智计划项目、中国矿业大学“越崎引智计划”项目的联合资助。

时间和地点 Time and location

September 21, 2023, 9:00 AM-17:00 PM 2023年9月21号上午9:00-下午17:00

School of Environment and Surveying, China University of Mining and Technology
A512 中国矿业大学环境与测绘学院 A512

参会领导与嘉宾 Attendees

Chen Liang 陈靛	Deputy Director of International Office, China University of Mining and Technology 中国矿业大学国际处副处长
Wang Shougang 王守刚	China University of Mining and Technology 中国矿业大学环境与测绘学院书记
Wang Qianxin 王潜心	China University of Mining and Technology 中国矿业大学环境与测绘学院科研副院长
Zhang Kefei 张克非	China University of Mining and Technology 中国矿业大学环境与测绘学院教授
Qin Kai 秦凯	China University of Mining and Technology 中国矿业大学教授
Jason Blake Cohen	China University of Mining and Technology 中国矿业大学教授
Gerrit de Leeuw	Royal Netherlands Meteorological institute 荷兰皇家气象学院教授

Simone Lolli	National Research Council of Italy, IMAA-CNR 意大利国家研究委员会环境分析方法研究所研究员
Tony Christian Landi	National Research Council of Italy, The institute of Atmospheric Sciences and Climate 意大利国家研究委员会大气科学与气候研究所研究员
Firoz Khan	North South University 孟加拉南北大学副教授
Juseon Bak	Pusan National University 韩国釜山大学助理教授
Wang Shuo 王 硕	China University of Mining and Technology 中国矿业大学助理教授

会议议程 Agenda

Stage 1 第一阶段: 9:00-10:30		
Academic report on Remote Sensing Monitoring of Air Pollution and Carbon Emissions 空气污染和碳排放遥感监测学术报告 1		
Chair 主持人: Jason Cohen		
9:00-9:30	Simone Lolli National Research Council of Italy, IMAA-CNR 意大利国家研究委员会环境分析方法研究所	Climatological assessment of the vertically resolved optical and microphysical aerosol properties by lidar measurements, sunphotometer, and in-situ observations over 17 years at UPC Barcelona
9:30-10:00	Juseon Bak Pusan National University 韩国釜山大学	Consistent ozone profile retrieval from OMI, GEMS, and TROPOMI
10:00-10:30	Tony Christian Landi National Research Council of Italy, The institute of Atmospheric Sciences and Climate 意大利国家研究委员会大气科学与气候研究所	Modelling of dispersion and atmospheric composition: from continental to urban scale
Stage 2 第二阶段: 15:00-16:00		
International Seminar on Remote Sensing Monitoring of Air Pollution and Carbon Emissions 空气污染和碳排放遥感监测国际研讨会		
Moderator 主持人: Qin Kai 秦凯		

15:00-15:20	<p>致辞 Opening Speech</p> <p>中国矿业大学国际处副处长 中国矿业大学环境与测绘学院领导</p>	
15:20-16:00	<p>嘉宾发言介绍各自单位/团队情况</p> <p>Simone Lolli National Research Council of Italy, IMAA-CNR 意大利国家研究委员会环境分析方法研究所研究员</p> <p>Tony Christian Landi National Research Council of Italy, The institute of Atmospheric Sciences and Climate 意大利国家研究委员会大气科学与气候研究所研究员</p> <p>Firoz Khan North South University 孟加拉南北大学副教授</p> <p>Juseon Bak Pusan National University 韩国釜山大学助理教授</p>	
<p>Stage 3 第三阶段: 16:00-17:00</p> <p>Academic report on Remote Sensing Monitoring of Air Pollution and Carbon Emissions 空气污染和碳排放遥感监测学术报告 2</p> <p>Chair 主持人: Jason Cohen</p>		
16:00-16:30	<p>Gerrit de Leeuw Royal Netherlands Meteorological institute 荷兰皇家气象学院</p>	<p>Spatio-temporal aerosol variations over China using multi-sensor satellite observations</p>
16:30-17:00	<p>Firoz Khan North South University 孟加拉南北大学</p>	<p>Overview of air pollution in Bangladesh and possible mitigation strategies</p>

专家简介 Expert Profile

Dr. Simone Lolli



男，意大利国家研究理事会环境分析方法研究所 (IMAA-CNR) Senior Research Scientist、意大利佛罗伦萨大学遥感技术工程系教授。2019年11月份受聘环境与测绘学院客座教授，为地理信息科学专业讲授《定量遥感导论》课程。

Simone Lolli is a permanent senior scientist for the Italian National Research Council (CNR) and scientific Co-PI of the NASA MPLNET Lidar Network. He is also graduate program faculty associate member of the University of Maryland Baltimore County (UMBC) and aggregate professor (Cultore della materia) at University of Florence, Engineering Department on Remote Sensing Techniques for Image processing (DINFO). In the last ten years, Simone developed significant experience in the applied research, especially in atmospheric remote sensing, both from space and from ground, to study aerosol and cloud optical, geometrical and microphysical properties, together with their interaction with climate, meteorology, air quality and earth energy budget. He also participated in several field campaigns in South-East Asia in the frame 7-SEAS NASA mission. Simone holds a Ph.D. degree in Physics from the Ecole Polytechnique, Palaiseau, France and an M.Sc. degree in Physics from the University of Florence, Italy. He has lived in four countries and speaks Italian, English, French, German, Italian, Portuguese and Spanish. His colleagues describe him as detail-focused, organized, and goal-oriented. 50+ publications in peer-reviewed journals and conference proceedings.

Dr. Juseon Bak



女，韩国釜山大学助理教授，研究项目涉及光谱、波长和仪器响应函数的校准，精确/快速辐射传输计算，模拟观测光谱的算法物理扩展，卫星和现场测量之间的交叉验证，遥感的科学分析，已发表学术论文 20 余篇。

Dr. Bak's research focuses on the analysis of spectra measured by spaceborne spectrometers operating in the ultraviolet and visible to measure atmospheric composition. Her current research projects involve the calibration of spectra, wavelength, and instrumental response function, accurate/fast radiative transfer calculations, extension of algorithm physics to simulate the observed spectra, cross verification between satellite and in-situ measurements, scientific analysis for the remote sensing of trace gases and aerosols. As a result, the ozone profile algorithm she is working on is going to be implemented to reprocess OMI ozone profile product (PROFOZ) in the NASA data center and to be transferred to both GEMS and TEMPO Science Data Processing Center (SDPC). She is pioneering the implementation of Principle Component Analysis (PCA)-based fast radiative transfer calculation to the operational data processing to reduce the computational cost and the combined UV/VIS retrievals to improve the detection of the boundary layer ozone from GOME/2 and TEMPO.

Dr. Tony Christian LANDI



男，意大利国家研究理事会大气科学与气候研究所研究员。2012年获得物理学博士学位，主要研究兴趣是大气物理和化学，已发表学术论文 20 余篇。

Dr. Tony's research focused on atmospheric physic and chemistry. The aim is to understand the processes that control the budgets of atmospheric aerosols and gases that play a key role in the context of global climate change and in regional air quality. The main tools adopted are: 3-D computer models of atmospheric processes that affect chemical species, and data from both in-situ and remote-sensing instruments. Patents and Books: I am author of Italian Patent n.0001384527 entitled "A method for the detection of electromagnetic spectral signature during wild land fires, based on emission from trace elements in biomass tissues", 30th December 2010. pdf AODEM: A post-processing tool for aerosol optical properties calculation in the Chemical Transport Models. Book published by LAP (2013)- Lambert Academic Publishing.

Dr. Gerrit de Leeuw



男，荷兰皇家气象研究所教授。2019年11月份受聘环境与测绘学院客座教授，为地理信息专业本科生讲授《资源与环境遥感》课程。

Gerrit de Leeuw is Professor Emeritus from the University of Helsinki and the Finnish Meteorological Institute. He joined KNMI, Department of Satellite Observations, in 2020 and is a visiting professor at RADI-CAS (Beijing), and CUMT (Xuzhou), China. Gerrit de Leeuw has published about 250 scientific papers in peer-reviewed journals on topics varying from the production and concentrations of sea spray aerosols, air-sea gas transfer, oceanic waves and bubbles and, since 1995, satellite remote sensing of aerosols and algorithm development for different sensors, in particular using the dual view capacity of the (advanced) along-track scanning radiometers (A)ASTR. He has been involved a wide variety of international projects on these topics, often as coordinator or work-package leader. He has been leading research groups at TNO (Netherlands) and FMI (Finland) for more than 30 years. Currently, his primary interest is the application of satellite remote sensing of aerosols and trace gases in studies on air quality and climate, with a focus on the spatiotemporal variation of aerosol properties over China. The comparison of satellite data with ground-based observations and model results leads to better understanding of the variation of the concentrations of aerosol and trace gases and the influencing factors. (H-index 51; Web of Science 51, Google Scholar 69).

Dr. Md Firoz Khan



男，孟加拉国南北大学环境科学与管理系副教授，研究方向为大气环境污染监测与控制，著名SCI期刊《Elementa》(Q1分区)副主编，2019年10月受聘环境与测绘学院客座教授，为环境学科研究生讲授《气溶胶控制理论与技术》课程。

Md Firoz Khan is a Firoz Khan is a associate professor for North South University. He holds a Ph.D. degree from Yokohama National University, Japan. His research focuses on Fundamental Chemistry, Atmospheric chemistry, Environmental analytical chemistry, Receptor modeling, and Air pollution. More than 40 published and ongoing papers. In October 2019, he was hired as a visiting professor at the School of Environment and Surveying to teach the course "Aerosol Control Theory and Technology" to graduate students in the environmental discipline. He is the chair (Technical Committee), Annual Meeting of Mediterranean Geosciences Union (MedGU) 2023.