The 9th International Symposium on Diagnosis of Environmental Health by Remote Sensing (DEHRS)
and
The Workshop of DEHRS on
The Belt & Road (WDEHRS on B&R)

Conference Brochure

ZHENGZHOU • CHINA | AUGUST 10-12

Contents

Notes to Participants

Dear Delegates,

Welcome to the beautiful Zhengzhou City (Capital of Henan Province) to attend the 9th International Symposium on Diagnosis of Environmental Health by Remote Sensing (DEHRS) and the Workshop of DEHRS on The Belt & Road (WDEHRS on B&R).

First of all, let's give you a brief introduction about Zhengzhou and Henan Province. Henan Province has a long history and culture. It is the root of Chinese ancestors and the source of Chinese history and civilization. With splendid culture, outstanding people and celebrities, it is an important birthplace of Chinese surnames. Rich in resources, it is the main agricultural production areas and important mineral resources province. With a large population, it is a province with a large population, abundant labor resources and huge consumption market. It has a superior location and sits in the middle of the world. Known as "the Hinterland of Jiuzhou (Nine Regions of Ancient China) and the Thoroughfare to ten provinces", it is an important comprehensive transportation hub and logistics and information center in China. It has a leading place in agriculture and is China's major agricultural province and grain conversion and processing province. It has been developing rapidly and now ranking fifth in China in total economic output. Henan has a huge potential and is now at a crucial stage of poised to rise and transformation, with growing vitality and increasing power.

Zhengzhou is the capital of Henan province, an important central city in central China, a megacity, a national important comprehensive transportation hub, a trade and logistics center, a central city in central China's city cluster, and a national garden city. With the largest freight train marshalling station in Asia, Zhengzhou is an important railway, aviation, electricity, postal and telecommunications hub city. Zhengzhou airport port area is China's only national airport economic comprehensive experimental zone. Zhengzhou Commodity Exchange is China's first futures exchange, and Zhengzhou is also a core part of China (Henan) pilot free trade zone.

The Zhengdong New District, where the conference takes place, is a new urban district in Zhengzhou City. It starts from Zhongzhou Avenue in the west and ends at Wansan Highway in the east. It starts from the south bank of the Yellow River in the north and extends to the Longhai Railway in the south. Zhengdong New District

adheres to the concept of group development. It builds a new city and drives the organic renewal of the old city. So it realizes the interactive development and common development of the old city and new city. Zhengdong New District currently consists of five functional groups. Among them, Longhu Group is the financial core area of Zhengdong New District. Longzi Lake Group is based on colleges and universities, focusing on the development of science and technology research and development industries. Zhengzhou East Station hub group focuses on the development of business, headquarters economy, financial back-office services, e-commerce and other business formats; The aim of Baisha Group is to become the administrative service area, the public cultural service demonstration area, the high-end headquarters, and the business base. The Yanhuang Urban Agricultural Group focuses on the development of urban modern agriculture featuring leisure and sightseeing. The five functional groups are relatively independent with their own functions, and each has its own emphasis. It has changed the development model of "big cakes" in traditional cities, and realized functional integration, urban-rural integration and overall development. The development and construction of Zhengdong New District not only increased the area of Zhengzhou built-up area from 212 square kilometers in 2003 to 443 square kilometers, and the population from 7 million to nearly 10 million, but also promoted Zhengzhou's urban positioning to a national central city form a regional central city.

The following are detailed arrangements you need to know about traffic, meals and accommodations of the conference. Kindly advising you to read them carefully beforehand. All our staff are ready to provide satisfactory services for each delegate, should you have any questions please feel free to let us know. We wish all delegates have a happy experience during this conference period in Zhengzhou!

1. Registration arrangements

Pick-up service at the Airport or Station is only provided for the main speaker and hosts of session meetings. For other delegates, please choose taxi, bus or other transportation methods to reach the venue of conference.

Time of registration: 8:00-22:00, 9 August (Friday), 2019.

Place of registration: Dahe Jinyue Hotel (the Venue), Zhengdong New District, Zhengzhou city. Hotel address: Crossroad of Shangwu Outer Ring Road and Shangwu West No.7 Street, 2 Shangwu Outer Ring Road, Zhengdong New District, Zhengzhou. Hotel Tel: 400-699-8818

Traffic Routes to Venue/Hotel:

From Zhengzhou East Station to Venue/Hotel: Take the Subway Line No.1 (bound for Hebei Industry University) to get off at Convention Center Station. Get out through the Exit B1 and walk about 420 meters to the Venue/Hotel.

From Zhengzhou Xinzheng International Airport to Venue/Hotel: Take the Subway's Suburban Commuter Line (bound for South 4th Ring Road) to get off at South 4th Ring Road Station. Then transfer to the Subway Line No.2 (bound for Liuzhuang) to get off at Purple Mountain Station. And then transfer to the Subway Line No.1 (bound for New District of Henan University) to get off at Convention Center Station. Get out through the Exit B1 and walk about 420 meters to the Venue/Hotel.

From Zhengzhou Train Station to Venue/Hotel: Take the Subway Line No.1 at Zhengzhou Train Station (bound for New District of Henan University) to get off at Convention Center Station. Get out by the Exit B1 and walk about 420 meters to the **Venue/Hotel**.

2. Meals arrangements

Meal Place: Hezhizhou Restaurant at 3rd floor, Dahe Jinyue Hotel.

Meal Type: buffet.

3. Venue and accommodation arrangements

Accommodation place: Dahe Jinyue Hotel.

Conference venue: Jinyue Hall, Yihe Hall, Luohe Hall, Dahe Jinyue Hotel.

Address: Crossroad of Shangwu Outer Ring Road and Shangwu West No.7 Street, 2 Shangwu Outer Ring Road, Zhengdong New District, Zhengzhou.

Hotel Tel: 400-699-8818 (operator).

Location Map

4. Notes

1) Please wear Delegate's Card when participating the conference. And when having meals, please bring meal-tickets and go to the designated restaurant.

2) During the conference, please turn off mobile phone, and try not to walk around.

3) Please take care of your own valuables to prevent accidental loss.

5. Departure arrangements

Departure time: The conference ends at 12 August 2019. Accommodations offered by the Conference is till 13 August (Tuesday), 2019. Please arrange your departure time in advance. Please choose taxi, bus or other transportation methods for departure.

6. Contact information of Conference staff

Contact person (No. 1): Xu Min (State Key Laboratory of Remote Sensing Science).

Phone number: 010-64806228.

Fax: 010-64836205.

E-mail: xumin@aircas.ac.cn.

Contact person (No.2): Zhang Yufei (Henan Xinyi Convention Planning Limited Company).

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Arranged by the Conference Team

8 August 2019

Conference Organizations

1. Conference Objectives

The Symposium on Diagnosis of Environmental Health by Remote Sensing (DEHRS) was initiated by Cao Chunxiang, researcher of Aerospace Information Research Institute, Chinese Academy of Science (formerly Institute of Remote Sensing and Digital Earth), aiming to provide environmental health diagnosis technology for scientific research and national management departments by utilizing Remote Sensing technology. With the support of many academicians and scientists, eight academic symposia of this kind have been successfully held so far since 2011 respectively in Beijing, Chengdu, Shenzhen, Fuzhou, Langfang, Nanchang, Ordos and Kyoto, Japan. The 9th International Symposium on Diagnosis of Environmental Health by Remote Sensing is hosted by Aerospace Information Research Institute, Chinese Academy of Science, Center for Applications of Spatial Information Technologies in Public Health and organized by Management Committee of Zhengdong New District, Zhengzhou City and State Key Laboratory of Remote Sensing Science. It will be held in Zhengdong new district, Zhengzhou City (the capital city of Henan Province) on 10-12 August 2019.

Henan Province is located at central China. It is bordered by Anhui Province and Shandong Province in the east, Hebei Province and Shanxi Province in the north, Shaanxi Province in the west, and Hubei Province in the south. The region looks north to south and connects east to west. It crosses four water systems including Haihe river, the Yellow River, Huaihe river and the Yangtze river. Henan is located at the junction of the coastal open areas and the central and western regions, and it is the middle zone of China's economic development from east to west. Known as the "the Hinterland of Jiuzhou (Nine Regions of Ancient China) and the Thoroughfare to ten provinces" It is an important comprehensive transportation hub and logistics information center in China.

The conference is held in Zhengdong New District, Zhengzhou City, capital of Henan Province. Zhengdong New district adheres to the concept of green development and strives to build itself into an international regional financial center, an international central business district and an ecological livable city of international level. Advanced concepts such as ecological city, symbiotic city, ring-form city, metabolic city and regional culture city are introduced in Zhengdong New District, and the concept of urban center axis of urban history, ecology, commerce and tourism space-time development in southwest and northeast direction is put forward, which realizes

organic integration and harmonious symbiosis with the old city. By introducing the concept of biosphere and combining the geographical conditions of fishponds and high underground water level, the Longhu Lake with water conservancy, ecological and landscape functions is planned to form the Longhu biosphere with Longhu as the core. Using roads and water areas as carriers, a diversified and multi-level ecological corridor is constructed to organically connect with Songshan biosphere and Yellow River biosphere in Zhengzhou. CBD and Longhu Financial Island are two ring-form cities connected by canals, which constitute the "Ruyi"(an auspicious jade object) type symbolizing good luck and harmony. The exhibition hotel and Henan Art Center are commercial and residential buildings that have introduced the traditional "quadrangle courtyard" and "nine-palace style", which perfectly integrate the central plains culture and modern design, highlighting the strong traditional cultural connotation.

This conference will be transformed from the academic seminar into interdisciplinary, cross-industry integrated Symposium. With the theme of "The Belt and Road", scientists, entrepreneurs and young talents from China, the United States, Japan, Thailand, Pakistan, Nepal, and other "The Belt and Road" member countries and Asia-pacific region gather in Lao tze's hometown in Henan Province in China to discuss research development and business cooperation of DEHRS, and promote the development of global environmental health protection and green economy.

The conference lasts for three days. On the first day, 10 experts and scholars all around the world will give us high-level academic report of DEHRS. On the second day, scientists from the all walks of life, education experts, entrepreneurs and business elites will have in-depth discussions in business cooperation of production, study and the wonderful report and make meaningful reports on environmental health. All the participating experts will discuss the development of "The Belt and Road" environmental health and green economy in Zhengzhou, which has fantastic cultural heritage.

2.Presidium of the conference

The presidium of the conference, led by academician Wu Yirong from the host organization, is composed of well-known experts all around the world who initiated this series of conferences, experts and scholars who actively promoted the interdisciplinary development of remote sensing diagnosis of environmental health and people who made outstanding contributions to social development. Their names are listed hereunder:

Presidents：

Wu YiRong, President of Aerospace Information Research Institute of Chinese academy of sciences, Academician of Chinese Academy of Science

Vice-presidents：

Ranga B. Myneni, Professor of Boston University, United States

Ramesh P. Singh, Senior editor of the Journal of natural disasters and risk, United States

Haruo Sawada, Professor of Tokyo University, Japan

Kaneyuki Nakane, Professor of Hiroshima University, Japan

Tan Rongyao, Vice president of Chinese Society for Urban Studies, former party member of National Energy Administration, China

Fan Qingbin, Principal of Songjiang Wushu School, China

Guo Erming, President of Beijing Aitaipu Biomedical Technology co., LTD, China

He Jianguo, Principal of Ningxia University, China

Zhang Hongyang, secretary of the Party committee of the Xuchang Campus of Henan Agricultural University, China

3. Organizing Committee

Host Units：

Aerospace Information Research Institute, Chinese Academy of Sciences

Center for Applications of Spatial Information Technologies in Public Health

Organizing Units：

Management Committee of Zhengdong New District

State Key Laboratory of Remote Sensing Science

Presidents：

Cao Chunxiang, Executive Director of Center for Applications of Spatial Information Technologies in Public Health

Cao Wuchun, Executive Director of Center for Applications of Spatial Information Technologies in Public Health

Vice Presidents：

Zhang Hao, Vice Director of State Key Laboratory of Remote Sensing Science (Representative of the first host unit)

He Binbin, Subdecanal and Professor of School of Resources and Environment, University of Electronic Science and Technology (Representative of the second host

unit)

Wu Yongsheng, Director of Information Department of Shenzhen Center for Disease Control and Prevention (Representative of the third host unit)

Wang Xiaoqin, Researcher of Spatial Information Research Center of Fujian Province (Representative of the fourth host unit)

Hao Yulong, President of North China Institute of Aerospace Engineering (Representative of the sixth host unit)

Yin Xiaohong, Inner Mongolia Autonomous Region Science and Technology Department Exchange Center (Representative of the seventh host unit)

Tetsuro SAKAI, Professor of Kyoto University, Japan (Representative of the eighth host unit)

Niu Ruihua, Deputy secretary of the party work committee of Zhengdong New District, executive deputy director of Management Committee of Zhengdong New District (Representative of the ninth host unit)

Secretariat Office:

Secretary general :

Wei Ningdi, Vice Director of Management Committee of Zhengdong New District

Liu Wenjie, Vice President of Hongda Technology (Beijing) Co., Ltd.

Deputy secretary general :

Xu Min, Associate Researcher of State Key Laboratory of Remote Sensing Science, State Key Laboratory of Remote Sensing Science

Zhao Jian, Associate Researcher of CDC Emergency Office

Li Xiaowei, Secretary for economic development of Management Committee of Zhengdong New District

Gao Hong, General Manager of Henan Xinyi Exhibition Planning Co., Ltd.

Secretaries：

Chen Wei, Assistant Research Fellow, State Key Laboratory of Remote Sensing Science

Jia Jinyu, Management Committee of Zhengdong New District

Conference Affairs：

Chen Yiyu, State Key Laboratory of Remote Sensing Science

Xie Bo, State Key Laboratory of Remote Sensing Science

Lin Xiaojuan, State Key Laboratory of Remote Sensing Science

Huang Zhibin, State Key Laboratory of Remote Sensing Science

Wang Kaimin, State Key Laboratory of Remote Sensing Science

Barjeece Bashir, State Key Laboratory of Remote Sensing Science

Feng Li, Henan Xinyi Exhibition Planning Co., Ltd.

Zhang Yufei, Henan Xinyi Exhibition Planning Co., Ltd.

Yin Yancen, Henan Xinyi Exhibition Planning Co., Ltd.

Zhou Na, Henan Xinyi Exhibition Planning Co., Ltd.

Conference Arrangements

The 9th International Symposium on Diagnosis of Environmental Health by Remote Sensing (DEHRS) and The Workshop of DEHRS on The Belt & Road (WDEHRS on B&R) is held on 10-12, August in Zhengzhou City, Henan Province, lasting for 3 days.

The conference is initiated by Researcher Cao Chunxiang, Division of Environmental Health, State Key Laboratory of Remote Sensing Science, Aerospace Information Research Institute, Chinese Academy of Science. The DEHRS series of conferences have been held for eight times in Beijing, Chengdu, Shenzhen, Fujian, Hebei, Jiangxi and Inner Mongolia under the host of Center for Applications of Spatial Information Technologies in Public Health and the branch center. On the basis of this, the 2019 conference is hosted by Aerospace Information Research Institute, Chinese Academy of Science and organized by Management Committee of Zhengdong New District and State Key Laboratory of Remote Sensing Science. The style between the 9th conference and the previous series is a bit different in academic discussion. Some innovative attempts are made to turn scientific research achievements into productive forces.

On the first day (Aug.10), the director of the host place will address the opening ceremony and so do the relevant leaders of the host organization. The sponsors of the conference will report to the conference on the experiences of the previous eight international academic conferences on remote sensing diagnosis of environmental health, as well as the themes and specific arrangements of this conference. Led by Menas C. Kafatos, an academician of both South Korea and Malaysia, five experts from the United States, Japan, South Korea and Thailand, will give us great academic reports respectively on: Wildfires at Scales and Climate Change, Disaster remote sensing diagnosis, Wood properties and human health, the Relationship between natural environment and social economy, and Overview of GNSS CORS network in Thailand and its development for disaster monitoring. And all these reports are relevant to elements of environmental health. Five representative leading scholars from the University of Chinese Academy of Social Sciences, Peking University, Beijing Forestry University, Institute of Geography Sciences and Natural Resources Research, Chinese Academy of Sciences, and State Key Laboratory of Remote Sensing Science, Aerospace Information Research Institute, Chinese Academy of Science are invited to give us five speeches on: Environmental health and energy structure, Understanding PM2.5 from Microscopic Characteristics to Spatial

Distribution, Environmental health and response mechanism of wetland reserve, Ten major scientific issues concerning the study of China's north-south transitional zone, and Response analysis of human activities and environmental health. After the afternoon Tea/Coffee break, the ten afore-mentioned report experts will sit on the rostrum and discuss freely with the audience. On the second day (Aug.11), we will focus on the environmental health and remote sensing technology applications on the Belt and Road. The conference will focus on the patented science and technology and the successful transformation of scientific and technological achievements, carrying out in-depth integrated development discussions of the five modules including environmental health and water, soil, gas, public safety and ecological health.

Through this conference, two goals are expected to reach. Firstly, try to provide scientific support for the development model of Zhengdong New District with tertiary industry, and give advice to help Zhengdong New District to become Henan Province's new highland science and technology center. Secondly, take Zhengdong New District as the foothold, we are trying to realize the real integration of production, education and research. And taking environmental health as the starting point, provide credible technology for the government in the process of implementing the government policy for purchasing services.

The registration is on August 9. Speakers can register one day in advance (August 8). The opening of the conference is on August 10 and 10 experts from around the world will give speeches on scientific research and humanistic concepts related to environmental health. In the morning of August 11, we set three modules including environmental health and water, environmental health and soil, environmental health and air, public safety and ecological health. We will focus on the in-depth discussion of "Belt & Road" and Environmental Health" and consolidate the product list that can be applied to industrialization. Closing ceremony is on the August 11 in the afternoon. On August 12, participants are invited to visit and study the development of Zhengdong New District. August 13 is departure day for all the participants.

The detailed agenda of the conference is as follows:

Conference Agenda

Chair: Wei Ningdi

Date	Time	Activities		Place	Person in Charge
Aug 8-9	11:00-13:00	Lunch		Hezhizhou Dining Hall	Zhang Yufei
	15:00-22:00	Registration in Jinyue Hall (4F), Dahe Jinyue Hotel		Entrance	
	18:00-20:00	Dinner		Hezhizhou Dining Hall	
Aug 10 : Academic reports from scholars around the world and discussions					
Aug 10	8:00-8:40	Opening ceremony	The host introduces guests	Dahe Jinyue Hotel , Jinyue Hall (4F)	Wei Ningdi
			Speech by local unit leader		District leader
			Speech by the conference presidium		Presidium
	8:00-9:00	Plenary lecture on DEHRS (China)			Cao Chunxiang
	9:00-10:30	Group photo and Tea & Coffee break			Liu Wenjie
	10:30-10:50	Environmental health and human activities (China)			Shi Jiancheng
	10:50-11:10	Wood properties and human health (Japan)			Kajida Hiromu
	11:10-11:30	Understanding PM2.5 from microscopic characteristics to spatial distribution (China)			Hu Min
	11:30-11:50	Satellite and ground observations for our survival (United States)			Ramesh P Singh
	11:50-13:00	Lunch and rest		Hezhizhou Dining Hall	Zhang Yufei
	13:00-13:20	Hyperspectral water quality remote sensing diagnosis (China)		Dahe Jinyue Hotel , Jinyue Hall (4F)	Zhang Lifu
	13:20-13:50	Overview of GNSS CORS network in Thailand and its development for disaster monitoring (Thailand)			Peerayom
	13:50-14:10	Understanding the relationship between environment and social economy ---work together to support and practice the global sustainable development (Japan)			PAN Shanhai
	14:10-14:30	Ten major scientific issues concerning the			Zhang Baiping

		study of China's north-south transitional zone (China)		
	14:30-14:50	Environmental health and energy structure(China)		Huang Xiaoyong
	14:50-15:10	Wildfires at different scales and climate change (United States)		Menas C. Kafatos
	15:10-15:30	Tea & Coffee break		Xu Min
	15:30-17:00	The report experts sitting on the rostrum discuss with the audience	Same as above	Cao Chunxiang
	18:00-20:00	Dinner	Hezhizhou Dining Hall	ZhangYufei, Chen Yiyu
Aug 11 : Discussion on integrated development of industry, education and research for the "B&R"				
Aug 11	8:30-9:30	Research and development of hyperspectral remote sensing diagnosis system for water quality parameters	Session One: Water, Soil and Atmosphere Luohe Hall (5F)	Zhang Lifu
	9:30-10:30	Environmental health and the soil		Zhuo Zefan
	10:30-11:00	Tea & Coffee Break		Chen Wei
	11:00-12:00	Multi-source remote sensing of air quality in China		Chen Liangfu
	8:30-12:00	Discussion on evaluation method of geological environment of soil erosion caused by coal mining in mountainous areas (Jiangsu Normal University, Kang Jianrong)	Session Two: Public Safety Yihe Hall (5F)	Gong Jianhua
		Artificial intelligence based on remote sensing and its application in emergency intervention scenarios of environmental public health (Aerospace Information Research Institute, Chinese Academy of Science, Peng Ling)		
		Predicting spatial distribution of dengue fever in Nepal using MODIS Time Series Seasonal Metrics and Three Machine Learning Modeling techniques (Sun Yat-sen University, Bipin Kumar Acharya)		
		Coordinative observation technology for high altitude barrier lakes (Aerospace Information Research Institute, Chinese Academy of Science, Zhang Xin)		
		3S practical application in public health emergency management (Chinese Center for Disease Control and Prevention, Zhao Jian)		

		Application progress of UAV RS and virtual reality techniques in public safety (Aerospace Information Research Institute, Chinese Academy of Science, Sun Jun)		
	8:30-12:00	Application of remote sensing information technology in agricultural census and hygiene field (Ning Xia University, Sun Xuehong, Zhang Peng)	Session Three: Ecology Health Jinyue Hall (4F)	He Jianguo, Wang Jianming
		Remote sensing, big data and ecological auditing (Shaanxi Electronics Industry Institute, Li Weibin)		
		Introduction of blueberry industry chain, emphasis on influence of water, steam and soil on planting (Qing Dao Bao Kang Agricultural Technology Co., Ltd., Fu Hongcun)		
		Ecological health and health (China Health Management Association, Li Lining)		
		Introduction of almond agriculture industry chain, emphasis on mountain forest ecology (Xing Lin Chun Xiao (Cheng De) Co., Ltd., Huo Jianjun)		
		Construction of food traceability system (Tianjin University of Science and Technology, Wang Jianming)		
	13:30-15:30	The session chairmen sitting on the rostrum discuss with the audience	Jinyue Hall (4F)	Cao Chunxiang
	15:30-16:00	Tea & Coffee Break		Secretariat
	16:30-17:00	Closing ceremony	Summery	Jinyue Hall (4F)	Cao ChunXiang
			Commendation		Presidium
			Closing		Wei Ningdi
	17:00-19:30	Dinner	Hezhizhou Dining Hall	Zhang Yufei
Aug 12 : Learning on the achievements of the rapid rise of Zhengdong New District				
Aug 12	9:00-17:00	To visit and study on: Zhengdong New District, G20 exhibition center, traditional culture, leading enterprises, universities, natural culture and historical sites.	Zheng Zhou	Zhang Yufei
	17:00-19:30	Dinner	Hezhizhou Dining Hall	

Introduction of the Chairpersons

of the Conference and Organizing Committee

1. Chairman of the conference

Dr. Wu Yirong, President of Aerospace Information Research Institute of the Chinese Academy of Sciences, Academician of the Chinese Academy of Sciences

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Dr. Wu Yirong, President of the Institute of Aeronautical Information, Chinese Academy of Sciences, President of the School of Electrical, Electronical and Communication Engineering of the University of Chinese Academy of Sciences, Deputy Director of the 16th Standing Committee of the Ministry of Information Science of the Chinese Academy of Sciences, Convener of the Department of Information and Communication Engineering of the Academic Degree Evaluation Committee of the State Council, the winner of the National Outstanding Youth Fund, the national-level candidate for the "Hundreds of Scientific Experts, Thousands of Scientific Leaders and Ten-thousands of Young Scientific Talents Project", receives the Special Allowance of the Chinese Government. In 2007, he was elected academician of the Chinese Academy of Sciences. He has been engaged in the design and development of microwave imaging technology and large-scale remote sensing ground processing systems for a long time and has promoted the construction and development of national aviation remote sensing systems in the past decade. In the field of microwave imaging, he invented multi-dimensional microwave imaging technology and sparse microwave imaging technology, led the key technology research and applied the achievements to the subsequent satellite systems. In the aspects of the architecture and data processing algorithms of remote sensing satellite ground processing and application systems, he systematically solved a series of theoretical problems and key technologies and improved the technical level of China in this field. He presided over a number of major national scientific research projects. The projects undertaken by him are large in scale, complex in technology and far-reaching in influence, and have promoted the long-term development of this field. As the project owner, he completed the construction of the national science and technology infrastructure-airborne remote sensing system. As the Chief Designer, he

presided over the construction of the aviation system in the national special high-resolution Earth observation system, and systematically promoted a series of internationally leading development of ground observation loads by aviation. He has won the First Prize and the Second Prize of the National Science and Technology Progress Award, the National Innovation Award, the Outstanding Talent Award of National Defense Science and Technology Industry, the First Prize of National Defense Science and Technology Progress, the First Prize of Science and Technology Progress of Chinese Academy of Sciences, the Science and Technology Progress Award of He Liang He Li Foundation, the Chen Jiageng Science Award and other major awards of national and provincial levels.

2. Chairpersons of Organizing Committee

Dr. Cao Wuchun, Director of the Institute of Microbiology and Epidemiology of the Academy of Military Medical Sciences, Executive Director of Center for Applications of Spatial Information Technologies in Public Health

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http://www.slors.cn/En/StaticPage/zxrycontent_6_17.html

Cao Wuchun, Ph.D., Researcher, Doctoral Supervisor, winner of the National Science Fund for Distinguished Young Scholars. He graduated from the Erasmus University in the Netherlands in 1996 with a Ph.D. He has been the visiting researcher at the University of Cambridge, the Karolinska Institute in Sweden and the Mahidol University in Thailand. He is currently the Director of the Institute of Microbiology and Epidemiology of the Academy of Military Medical Sciences, Director of the State Key Laboratory of Biosafety of Pathogenic Microorganisms; part-time Researcher and Doctoral Supervisor of Aerospace Information Research Institute, Chinese Academy of Sciences, and the Doctoral Supervisor at Shandong University. He has served as Assistant Director of the Institute of Microbiology and Epidemiology, Director of the Epidemiology Research Office, and Director of the National Army Disease Detection Center. He holds the rank of Senior Colonel in the People's Liberation Army (PLA).

Technical expertise in the field of social representation: Epidemiology and control of infectious diseases, applications of spatial information technology in the field of public health, and molecular epidemiology. Epidemiology, comprehensive prevention and treatment of infectious diseases, especially natural epidemic diseases. Evaluation of vaccine combined immune effects, molecular epidemiological investigation of important biological warfare agents, biological warfare epidemiology reconnaissance, and biological hazard assessment.

Experienced in on-site emergency analysis and accident technical analysis: He participated in epidemiological related emergency taskforces and made important contributions in dealing with epidemics such as SARS, avian flu, etc. He has won many awards in the related fields. He receives the Special Allowance of the Chinese Government approved by the State Council.

Dr. Cao Chunxiang, Professor of Aerospace Information Research Institute of Chinese academy of sciences, Executive Director of Center for Applications of Spatial Information Technologies in Public Health

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http://english.aircas.cn/education/sfis/201902/t20190201_205301.html

Dr. Chunxiang Cao, Research of Aerospace Information Research Institute, Chinese Academy of Sciences, and Professor of University of Chinese Academy of Sciences, Doctoral Supervisor, the founder of the interdisciplinary direction of "Diagnosis of Environmental Health by Remote Sensing". She was introduced by Chinese Academy of Sciences as excellent talent in 2000 when she obtained her Postdoctoral Degree in Biosphere Studies, Hiroshima University, Japan. And she is now the executive director of Center for Applications of Spatial Information Technologies in Public Health of Aerospace Information Research Institute, Chinese Academy of Sciences. She served as the Director of Science and Technology Department, Institute of Remote Sensing Applications, Chinese Academy of Sciences, etc. She is concurrently serving as the judges of major national plans, the expert of "863 Project" important project in earth observation and navigation technologies, the director of China Wetlands Association, the member of the first and the second experts committee of national wetland science technologies, the consultant expert of National Forestry and Grassland Administration, geography information system committee of Chinese Health Information Association, member of the disability prevention and control committee of the Chinese Preventive Medicine Association and other national professional committee. She is also the member of editorial committee or invited reviewer of international academic journals, such as *"Geomatics Natural Hazards & Risk", "International Journal of Remote Sensing", "BMC infectious Diseases"* and the editor of *"Chinese Plant Protection Encyclopedia"*. She has been the adjunct professor and visiting scholar in Harvard University, University of California, Berkeley, Boston University, Chapman University, San Jose University and Osaka City University. In the academic field, she established the inter-discipline direction of "Diagnosis of Environmental Health by Remote Sensing" for the whole world. In order to further promote the application of Environmental Health Diagnosis by Remote Sensing, Prof. Chunxiang Cao jointly established the center of Application Research for Space Information Technology in Public Health with the Academy of

Military Medical Sciences. And they integrated local resources and established successively ten sub-centers of application research of spatial information technology in public health. The team of "Diagnosis of Environmental Health by Remote Sensing" in virtual reality environment has been constructed for personnel training. Prof. Chunxiang Cao has successfully hosted eight international symposiums on Environmental Health Diagnosis and attended lots of International Conferences with the related topics. She has trained more than 300 technicians for industrial departments, published more than 200 papers, including more than 100 SCI papers and 9 monographs; and hosted more than 30 projects, including major national projects such as "973 Project" and "863 Project", as well as projects of National Natural Science Foundation and industry public welfare projects, etc. She has obtained 9 software copyrights and applied for 8 invention patents. She has published or co-authored 8 books of the "Diagnosis of Environmental Health by Remote Sensing" book series. She cultivated more than 30 Master and Ph.D. students, among which there were 8 students from other countries of Asia Pacific region. She has completed six "Scientific Experiments on Satellite Remote Sensing in Mu Us Sandy Land" by self-financing and joint efforts of social resources, which obtained first-hand information for remote sensing diagnosis of desertification. In 1985, Prof. Chunxiang Cao visited Japan with a China-Japan Friendship Delegation led by vice premier Liu Yandong. In 2017, as the only representative of the University of Chinese Academy of Sciences, she accompanied President Bai Chunli and President Ding Zhongli to meet with Thai Princess Maha Chakri Sirindhorn. In the same year, as a member of the national negotiation group, she participated in the United Nations Conference on combating desertification, and was awarded the "Pioneer Award of The Belt and Road Initiative" by the United Nations, and she introduced her series of monographs on "Diagnosis of Environmental Health by Remote Sensing" to vice premier Wang Yang.

Since coming back to China with her family in 2002, Prof. Chunxiang Cao has made positive contributions to the development of remote sensing cause in China.

Introductions of The Host & Organizer Units

1. Host Units

Aerospace Information Research Institute, Chinese Academy of Sciences

The Aerospace Information Research Institute (AIR) under the Chinese Academy of Sciences (CAS) was established in July 2017, following the approval by CAS President Board Meeting for consolidation of three CAS institutes: the Institute of Electronics (IECAS), the Institute of Remote Sensing and Digital Earth (RADI), and the Academy of Opto-Electronics (AOE). The merger is the outcome of CAS efforts towards reformation of its R&D system to meet future R&D challenges and to better meet the national demands.

AIR has twenty national-level / CAS-level key laboratories, centers, and non-legal-entity units. AIR aspires to achieve major scientific breakthroughs and take the lead in constructing a national laboratory in the field of aerospace information by pooling research advantages inherited from its former institutes and in line with major national needs.

AIR has developed an international S&T cooperation platform which consists of the International Society for Digital Earth (ISDE), the International Centre on Space Technologies for Natural and Cultural Heritage (HIST) under the auspices of UNESCO, the International Program Office for Integrated Research on Disaster Risk (IRDR IPO) and the CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation (SDIM).

The academic societies managed by AIR include China Remote Sensing Committee, Electronic Circuit and System Committee of Chinese Institute of Electronics, Science and Technology Committee of China Association for Quality, Association on Environmental Remote Sensing of China, Committee of Environmental Information Systems and Remote sensing under the Chinese Society for Environmental Sciences, Special Committee for Remote Sensing Image Processing, China Society of Image and Graphics. AIR also has three committees with the mandate to define national standards for remote sensing technologies, optical-electronic measurement, and to perform quality check for laser devices.

As a research institute that integrates both research and higher education, AIR hosts the UCAS School of Electronics, Electrical and Communication Engineering, and the UCAS School of Opto-electronics, and is committed to training talented scientists for the country, and fostering schools among top ranking schools in the fields of

Opto-Electronics and aerospace information.

AIR also hosts the *"International Journal of Digital Earth (IJDE)", "Microsystems & Nanoengineering", "Big Earth Data", "Journal of Electronics and Information", "Journal of Radar", "Journal of Remote Sensing"* and the *"Journal of Image and Graphics of China",* which are issued both at home and abroad and enjoying a high reputation.

Center for Applications of Spatial Information Technologies in Public Health

Center for Applications of Spatial Information Technologies in Public Health is jointly established in November 2003 by the Chinese Academy of Sciences and the Military Medical Science Academy of the PLA, relying on the Institute of Remote Sensing and Digital Earth of the Chinese Academy of Sciences (formerly Institute of Remote Sensing Applications) and the Institute of Microbiology and Epidemiology, Academy of Military Medical Sciences.

Based on the new discipline of "Diagnosis of Environmental Health by Remote Sensing ", it has made tremendous contributions to the prevention and control of sudden major infectious diseases such as SARS and influenza A, which seriously threaten the lives of Chinese people. The Center has undertaken many major national projects, which have greatly promoted the use of Remote Sensing and Geographic Information System (GIS) technologies in the main application of modern spatial information science and technology in the field of public health in China. In order to give play to local advantages and improve the application level of spatial information technology in the field of public health, and promote the construction of "Diagnosis on Environmental Health by Remote Sensing" as a scientific discipline nationwide, the center began to establish provincial-level sub-centers on March 13, 2012, and successively established 10 branches so far in Beijing, Shanghai, Sichuan, Shenzhen, Fujian, Hebei, Inner Mongolia, Shaanxi, Jiangxi and Guizhou.

2. Organizing Units

Management Committee of Zhengdong New District

The Zhengdong New District, where the conference takes place, is a new urban district in Zhengzhou City. It starts from Zhongzhou Avenue in the west and ends at Wansan Highway in the east. It starts from the south bank of the Yellow River in the north and extends to the Longhai Railway in the south. Zhengdong New District

adheres to the concept of group development. It builds a new city and drives the organic renewal of the old city. Therefor it realizes the interactive development and common development of the old city and new city. Zhengdong New District currently consists of five functional groups. Among them, Longhu Group is the financial core area of Zhengdong New District. Longzi Lake Group is based on colleges and universities, focusing on the development of science and technology research and development industries. Zhengzhou East Station hub group focuses on the development of business headquarters economy, financial back-office services, e-commerce and other formats; The aim of Baisha Group is to become the administrative service area, the public cultural service demonstration area, the high-end headquarters, and the business base. The Yanhuang Urban Agricultural Group focuses on the development of urban modern agriculture featuring leisure and sightseeing. The five functional groups are relatively independent with their own functions while each has its own emphasis. It has changed the development model of "big cakes" in traditional cities, and realized functional integration, urban-rural integration and overall development. The development and construction of Zhengdong New District not only increased the area of Zhengzhou built-up area from 212 square kilometers in 2003 to 443 square kilometers, and the population from 7 million to nearly 10 million, but also promoted Zhengzhou's urban positioning to a national central city from a regional central city.

State Key Laboratory of Remote Sensing Science

As the only national key laboratory in this field, the State Key Laboratory of Remote Sensing Science(SLRSS) focuses on: developing fundamentals of Remote Sensing science by examining the mechanisms underlying the interactions between all-band electromagnetic wave and ground objects, and radiation transfer models in Remote Sensing; establishing a comprehensive, multi-source monitoring and simulation platform for the Earth system by developing advanced technologies of Remote Sensing data acquisition and processing, and quantitative Remote Sensing inversion approaches; and offering scientific support to the studies of the Key Cycle Systems on Earth, and promoting the development of Earth System Science and Space Science and Technology in China by exploring fundamentals concerning the application of quantitative Remote Sensing in the monitoring of energy, water, and carbon cycle. At the same time, SLRSS also explores technologies and applications in Environmental Health Diagnosis by Remote Sensing, atmospheric environment Remote Sensing and agricultural Remote Sensing to serve the sustainable development of society.

Henan Xinyi Exhibition Planning Co., Ltd.

Henan Xinyi Exhibition Planning Co., Ltd. was established in 1999 and is a professional exhibition service company. The company is specialized in meeting affairs, exhibition services and business inspection market. It is an integrated marketing enterprise that provides domestic and overseas business inspection, domestic and international conference and exhibition management, activity management, team building and other integrated marketing services for government, enterprises and institutions, scientific research institutions, corporate group customers, industry associations and large-scale activity organizations with a professional structure and service mode.

With professional knowledge and experience in conference services, we provide clients with comprehensive planning and management of the conference agenda, budget, venue selection, reception planning, on-site registration management, conference arrangement, translation services, security services, etc., adding many highlights to the conference activities.

Under the premise of complying with the laws and government policies of the People's Republic of China, the company adheres to the principle of customers-focused service and builds service bridges for various forms of business interactions and economic and technological cooperation. Over the years, the company has built a humanized and professional service plan for its customers with comprehensive, meticulous and thoughtful service which have been well received by customers.

Tips About Weather & Staff Contact

1. Conference affairs contact:

Person-in-charge: Yin Yancen; TEL: +86 139-4909-1733

2.Weather Forecast

August	09	Cloudy	25~31℃
August	10	Cloudy	22~34℃
August	11	Sunny	20~31℃
August	12	Cloudy	21~32℃

Appendix

Intro of Experts and Report Abstracts (Sequenced by Speech Order)

Dr. Shi Jiancheng, Researcher of Aerospace Information Research Institute, Chinese Academy of Sciences

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Dr. Jiancheng Shi received his B.A. in Hydrogeology and Engineering-geology from the University of Lanzhou in China, and his M.A. and Ph.D. degrees in Geography from the University of California, Santa Barbara (UCSB) in 1982, 1987, and 1991, respectively. He then worked the Earth Research Institute at UCSB as a research scientist. Since 2010, he has joined the Institute of Remote Sensing and Digital Earth in Beijing, China as a director of State Key Laboratory for Remote Sensing Science (e-mail: shijc@radi.ac.cn). He is a Fellow of SPIE and IEEE, and an associate editor for Nature – Scientific Reports, Remote Sensing of Environment, Geoscience and Remote Sensing Letter, Science of China.

Dr. Shi has wide research interests in remote sensing theories and technologies, especially in microwave remote sensing in both active and passive techniques and its applications in water cycle and climatic change, including: 1) microwave modeling of snow, soil, and vegetation properties; especially by using state-art the theoretical microwave scattering and emission models to develop the simple, fast, and accurate parameterized microwave models for snow, vegetation, and rough surfaces，2) development of theory and novel inversion techniques for active and passive microwave remote sensing of soil moisture, snow and vegetation physical properties，3) applications of remote sensing data in water cycle and climatic change studies. He has published more than 400 journal and conference papers that related to above research topics.

Speech: Environmental health and human activities

As one of the driving forces of the changes of the earth's layers, human activities' quantitative and spatial methods have been the focus of space earth science research. It is difficult to express spatial differences well in the simulation based on geospatial autocorrelation. Time-series remote sensing data, high-resolution image data and big data analysis methods are increasingly widely used in studies on the impact of human activities on the earth system. By means of remote sensing earth observation and ground wireless sensor network, massive, multi-source, multi-temporal, multi-scale and high-dimensional long time series spatial geoscience data can be obtained. These data will help explore and understand the mechanism of changing the earth

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Dr. Hiromu Kajita was a professor at Kyoto Prefectural University until 2000. And then he became an honorary professor of Kyoto Prefectural University. He is currently engaged in research and graduate education activities as a special professor of Life and Environmental Sciences at Graduate School of Kyoto Prefectural University. The research fields are wood physics, wood-based materials science, wood chemical processing science, wood adhesion science and so on. In particular, he has conducted research and education on the physicochemical properties of wood such as wettability, the fundamentals of wood coating, the practice and application of wood adhesion and adhesives, the manufacture and properties of wood-based boards (oriented strand boards), chemical treatments of wood, etc. On the other hand, he worked as an executive in various academic associations both in Japan and internationally. At present, in consideration of environmental environment protection, research on effective utilization of oil palm trunk and research on chemical processing of wood by chemicals derived from agricultural waste are being conducted. He has authored 63 articles, reviewed 40 articles, and authored 15 books.

Speech: Wood properties and human health

Fossil fuels and energy on the earth are finite, and human being are benefited a lot for many years. However, in return for its function and efficiency, the global environment has changed, such as environmental pollution and global warming. Many people have come to recognize this change.

On the other hand, trees absorb carbon dioxide and grow trunks and branches. Wood obtained from trees consumes less energy during processing and less, while those processed into houses and furniture fix carbon for a long time. It can also be used in cascade for disposal. That is, wood is a renewable resource and a material with low environmental impact. Wood is mainly composed of three elements of carbon, oxygen and hydrogen, and is composed of three components of cellulose, hemicellulose and lignin, and contains a small quantity of extractives. Beside that wood has a fine and porous structure. Wood has many useful properties that do not exist in other materials. Also, these properties have a great relationship with human health. In this presentation, basics of wood science, global forest and timber production, wood characteristics and living environment, and sick house syndrome, are introduced and the relationship between the characteristics of wood and human health based on research data, will be described.

Dr. Min HU
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Professor of Peking University, Director of State Key Joint Laboratory of Environmental Simulation and Pollution Control (Peking University). She has received honors as National Natural Science Foundation for Outstanding Young Scholars, Cheung Kong Scholars Chair Professor, the Leading Scientist in the Field of Environmental Protection awarded by Ministry of Ecology and Environment of China and China's Outstanding Young Female Scientists Award.

She received the bachelor, master and Ph. D from Peking University in 1987, 1990 and 1993, respectively. She has been engaged herself in the research on the sources, secondary formation, environmental impact and control countermeasures of atmospheric particles since she worked at Peking University in 1993. She has built up physical and chemical characteristic analysis, aerosol chamber and model simulation method, conducted long-term measurements based on Peking University Urban Atmosphere Environment Monitoring Station (PKUERS) for urban atmospheric environment as well as several large field campaign experiments. She has been as the PIs for the scientific research projects such as the National Natural Science Foundation of China, 973, 863 and National research program for the key issues in air pollution control.

Speech: Understanding PM2.5 from Microscopic Characteristics to Spatial Distribution

PM2.5 is known as an aggregate of particles as small as 1 nm to 2.5 micrometer. It comes from the primary emissions of motor vehicles, industry, coal combustion, and the secondary formation of gaseous pollutants by chemical reactions in the atmosphere. There are hundreds of corresponding chemical components, including primary mineral elements and black carbon, secondary inorganic aerosols (sulfate, nitrate, ammonium) and secondary organic aerosols. Therefore, it is necessary to understand PM2.5 from three dimensions: particle size, chemical compositions and source.

The World Health Organization believes that 90% of health effects link to exposure of fine particle, PM2.5, in the atmosphere. The health effect depends on (1) the size of the particles, which can reach the position of the respiratory system of the human body. (2) the concentration level of the particles: Exposure does is the integral of particle concentration level in exposure time. High concentration during the pollution episode can cause short-term acute effects. (3) Chemical compositions: toxic and harmful substances in particulate matter, such as organic matter and heavy metals,

cause harm to human health. Therefore, it is necessary to fully understand the physical and chemical characteristics of particulate matter and its evolution process and characteristic change from source to atmospheric receptor. In the view of variation, to understand the evolution of particulate matter characteristics and concentration level with time, space and pollution control, so as to reveal its health effect mechanism and protect human health.

Dr. Ramesh P Singh, Professor of School of Life and Environmental Science, Schmid College of Science and Technology, Chapman University Orange, CA 92866, USA Email : rsingh@chapman.edu Professional Website: http://www1.ch apman.edu/~rsingh

Ramesh P. Singh, Ph.D., Professor, School of Life and Environmental Sciences, Chapman University, Orange, California, USA since 2009. He completed his graduation from Banaras Hindu University, Varanasi, India, MS in Solid Earth Geophysics in 1976 and Ph.D. in 1980. He was Post-doctoral and AOSTRA Fellow with the Department of Physics, University of Alberta, Canada during 1981-1986. He joined Department of Civil Engineering, Indian Institute of Technology (IIT), Kanpur, India as a Faculty member during 1986-2007. Dr. Singh joined George Mason University (GMU) as a Distinguished Visiting Professor during 2003-2005 and later on as Full Professor in 2007 until 2009. He moved to Chapman University, Orange, California, USA where he is continuing as of 2009. Dr. Singh has published more than 200 research papers related to Earth Sciences, Natural Hazards and Remote Sensing and supervised 37 M. Tech. and 7 Ph.D. students from India and USA. He was Chief Editor of Indian Journal of Remote Sensing during 1999-2007, Chief Editor of Geomatics, Natural Hazards and Risk and Associate Editor of International Journal of Remote Sensing. He has edited several Special Issues of Journals and edited several books. His two edited books related to Natural Hazards published in 2018 by CRC Press, UK. Dr. Singh is recipient of Alexander von Humboldt Fellowship and visited Germany number of times and spent several months at the Free University, Berlin, University of Dresden and Max-Planck Institute in Mainz, Germany. Dr. Singh also visited Hirosaki University and Kinki University, Japan as JSPS Fellow. He is recipient of Indian National Remote Sensing, Indian National Mineral and Hari Om Ashram Prerit Awards, Fellow of Indian Remote Sensing Society and Indian Geophysical Union. He is member of the Editorial Board of Aerosol Air Quality Research. Dr. Singh was member of the IUGG Commission on Geo Risk since 2004 and served as Vice President. He was President of AGU Natural Hazards Focus Group for the period 2017-2018. He is also member of the IUGG-EMSEV Bureau.

Speech: Satellite and Ground Observations for Our Survival
Frequency of natural hazards is on increase globally, understanding of the natural

hazards requires a good knowledge of land, ocean, atmosphere, biosphere and cryosphere parameters. The natural hazards occurring globally is associated with the coupling between different elements of the Earth system science. The long time series of different parameters provide an understanding of all kinds of parameters as drivers of climate change. In the Developed countries, observing systems have grown, but due to lack in resources hinder deployment of such observing system in the Developing countries. In this talk, the need of deployment of observing system will be discussed for our survival with the changing climatic conditions, depleting of resources and keeping good health of people living specially in the Developing countries.

Dr. Lifu Zhang, Professor of Aerospace Information Research Institute of Chinese academy of sciences

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Dr. Lifu Zhang is the deputy director of the National Engineering Laboratory of Remote Sensing Earth Applications of the Chinese Academy of Sciences, director of the Hyperspectral Research Office, the member of China National Committee of International Digital Earth Society, the Deputy Director of Imaging Spectroscopy Professional Committee, the Member of International ISIS TC Committee, the Member of Academic Committee of ACRS Association, the Deputy Chairman of Expert Committee of China Remote Sensing Application Association, the Member of China Space Remote Sensing Committee and also the IEEE Senior Member. He also hosted the National Key Research and Development Program, the National Natural Science Foundation of China, the Innovative Team of the Corps, and other provincial and ministerial level projects. He has published more than 200 papers, and more than 80 SCI papers in internationally renowned journals such as Remote Sensing of Environment, IEEE TGRS, and IEEE TGRL. He also owns 90 patent applications and more than 30 registered software works. He won the second prize of National Science and Technology Progress Award in 2018 (ranked second), the outstanding contributor of the Outstanding Science and Technology Achievement Award of the Chinese Academy of Sciences in 2016, the second prize of the Army Science and Technology Progress Award, the second prize of the Geographic Information Technology Progress Award, and the third prize of the Science and Technology Progress Award.

Speech: Hyperspectral water quality remote sensing diagnosis
The shortage and pollution of inland water resources of China has been arousing the attention of our state and society. Accurate and fast water quality monitoring is getting more and more important. Remote Sensing technology has opened new avenues for

water quality monitoring and research with its unique advantages. It can achieve rapid, large-scale, low-cost, periodic dynamic monitoring of water quality. Due to the complex and variable spectral characteristics of inland water bodies, and the traditional methods have the drawbacks of complex, long cycle and high cost, the hyperspectral data of high spectral resolution can capture this spectral information more effectively. The report introduces the current status of remote sensing diagnosis of hyperspectral water quality, the typical application results of integrated water quality testing in the sky and ground, and the application ideas.

Dr. Peera YOMWAN, Ph.D.
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Dr. Peera Yomwan is the chief of satellite positioning development group at Department of Lands, Thailand. He also works as a special lecturer of Bangkok Thonburi University. He is a senior professional survey engineer and a member of subcommittee on survey engineering of the engineering institute of Thailand. His Doctoral Thesis was relating to applying remote sensing technology to model waterborne diseases during flood disaster. His works and research areas include cadastral survey, GNSS network based RTK, machine learning for spatial environmental data, web mapping and so on.

Speech: Overview of GNSS CORS network in Thailand and its development for disaster monitoring GNSS CORS

The GNSS CORS Network is an infrastructure for surveying and mapping that plays an important role in research and application in various professional fields. Therefore, it is necessary to consider the accuracy and reliability of CORS Network. In Thailand, the Department of Lands has been building a CORS Network to cover areas throughout Thailand. We therefore analyze and examine the spatial accuracy of the network that can provide location-based services in centimeter-level. The results show that the Thailand CORS Network is accurate and reliable enough for research and development in various fields, especially in cadastral survey and disaster monitoring.

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Dr. Shanhai PAN is currently the Special Associate Professor of Global Business in the Global Center of Excellence (GCOE) and the Urban Research Plaza (URP) of Osaka City University (OCU) of JAPAN, and the Editorial Assistant for an Elsevier journal: *City, Culture and Society* (CCS). He is both an MBA and a DGB (Dr. of Global Business) holder. He is a quadrilingual speaking Chinese, English, Japanese and French in global communications thus being able to acquire timely necessary information globally. He is both a researcher-teacher and a social contributor in the global business world. His research-teaching fields include Global Business Management, Environmental Management, Design Management, Global Business Communication, Inter/Cross-Cultural Communications and Foreign Language Applications. Besides teaching and doing researches in the above fields in Japanese universities, he has also served as a Global Business Advisor for a Japanese chemical maker and a Global Marketer for a Japanese machinery maker for 4 years and has been serving as a Selection Committee Member of a famous Japanese Scholarship Foundation (NISF) for 8 years till now. He is the member of many Japanese academic societies such as Japan Academy of Business Administration (JABA), Sustainable Management Forum of Japan (SMF), Japan Society for Corporate Communication Studies (JSCCS) and Society for Intercultural Education Training and Research (SIETAR). He has also coordinated and conducted many international cooperation projects and symposiums in the related fields. He has authored and published many articles in Japanese, English and French languages in the related fields. Since (2014) being the Editorial Assistant of Elsevier's journal *City, Culture and Society* (CCS), he has handled over 1000 academic articles and help edited and published approximately 140 of them. (https://www.sciencedirect.com/journal/city-culture-and-society)

Speech: Understanding the relationship between environment and social economy---work together to support and practice the global sustainable development

As we all know, the natural environment is the material basis for the survival and development of human society, and it also provides the material resources for social and economic development. Generally, the natural environment has the following four important functions for human society to support its survival, production and economic development. a, Nature is the home of human habitation and survival; b, the natural environment is the base and object of social production activities; c, the natural environment is the discharge site and receiver of various wastes occurred in

the human economic activities; and d, the natural environment also provides human beings with good recreational places and atmospheres such as green mountains, beautiful waters, sunny days with gentle breezes, etc. And, what impact does human social and economic activities have on the natural environment? It goes without saying that human beings are an integral part of the natural environment, and the natural environment is the homeland for its survival. Human beings should live in harmony with the natural environment and prosper together. However, in the context of industrialized production in recent centuries, while human society has been utilizing and transforming nature for its own purposes, it has ignored the limitations of the natural environment thus arbitrarily exploiting the natural environment to meet its own unlimited needs.

As a result, the economic activities of human society have finally become the leading negative factors affecting the health of the natural environment, resulting in such global deterioration phenomenon as the degradation or extinction of the forests and grassland vegetations and the concomitant desertification, the decline of biodiversity, soil erosion and the intensification of various pollutions, the emergence of unprecedented infectious diseases and the frequent occurrences of hurricanes and tornadoes, the Greenhouse Effect of the atmosphere and the destruction of the ozone layer, etc., thus jeopardizing the normal development and continuation of the human society itself. All these have sounded and are still sounding the alarms for the human society!

This presentation begins with an easy-to-understand conceptual framework that succinctly describes the relationship between the natural environment and the social economy and explores the root causes of some global environmental problems. Then it introduces the important role of Diagnosis of Environmental Health by Remote Sensing and its practical significance in promoting the Belt and Road Initiative. The author advocates that the best way to maintain a coordinated development of the natural environment and the social economy is to work together globally to advance the early realization of the Sustainable Development Goals (SDGS) set by the UN General Assembly (September 2015)! Finally, some of Japan's countermeasure to treat environmental problems are presented for reference.

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Prof. Zhang Baiping is the chief scientist of the national science-technology basic resource investigation project "Integrated scientific survey of the north-south transitional zone of China" (2017FY100900) and the NSFC key project "Altitudinal-belt based quantification of mass elevation effect" (41030528). He is also the member of national forest park evaluation committee and the vice president of China Association for Scientific Expedition. He got his Bachelor degree from Lanzhou University in 983, Master degree from Peking University 1n 1985, and Ph.D. from Chines Academy of Sciences in 1992. He was a visiting scholar of University of Bonn (Germany) in 1994-1995 and a guest scientist of Max Planck Association in 1999. He has investigated most parts of the Tibetan Plateau, the Alps, the Himalayas, the Appalachia, and the Rocky Mountains. He developed data model for mountain altitudinal belts and realized digital integration of altitudinal bels all over the world; he analyzed and summarized the three-dimensional pattern of altitudinal belts; he developed conception model and digital models of mass elevation effect for global main mountain ranges, and greatly enhanced the ability of explaining complex geographic patterns with azonal earth-surface factors. He is now developing theory for pattern and mechanism of mountain altitudinal belts.

Speech: Ten major scientific issues concerning the study of China's north-south transitional zone

Abstract: Since the Qinling-Huaihe line was in 1958 delimited as the dividing boundary between north and south China, some arguments have still existed on the local position of the line, the criteria for dividing temperature zones, the line's environmental effect, etc. The National Basic Resources Investigation Program "Integrated Scientific Investigation of the North-South Transitional Zone," launched in 2017, introduced the concept of north-south transitional zone (Qinling-Daba Mts.) and was planned to explore the north-south dividing line from the perspective of transitional zone, so as to strengthen and even to make breakthrough in the study of the north-south dividing line. The Qinling-Daba Mts. are the main body of China's north-south transitional zone, with multi-dimensional zonal structures and high degree of environmental complexity, biological diversity and climatic sensitivity. The following ten scientific issues needs to deal with in the years to come: (1) North-south dividing line or north-south transitional zone? (2) How to acquire better criteria for identifying subtropical and warm-temperate zones? (3) Integral north-south series and variation of vegetation and soil types; (4) global warming and spatial movement of

key bioclimatic criteria; (5) Decomposition and integration of multi-dimensional zonal structure in the Qinling-Daba Mts.; (6) Pattern and mechanism of biological diversity and endemics; (7) The corridor effect of the Qinling-Daba Mts.; (8) Regional environmental effect and national ecological security; (9) The significance and position of the Qinling-Daba Mts. for the history and development of China; (10) Significance of the geographic structure of Western Qinling Mts. for the origin of Chinese civilization . These key issues identified are not only the results of previous researches, but also the starting point for further exploration and study in the future. They are intended to inspire and encourage the in-depth study of China's north-south dividing line or transitional zone, and to provide new perspectives and framework for the exploration of physio-geographic theories, biodiversity and ecological security, and even the birthplace of Chinese earliest civilization.

Huang Xiaoyong, Professor of University of Chinese Academy of Social Sciences

Huang Xiaoyong, Professor of University of Chinese Academy of Social Sciences and former President of the graduate school of the Chinese Academy of Social Sciences. At present, his main research fields are international energy security, international relations and geopolitics with energy finance as the main content, and spatial development strategy of national urban agglomeration centering on energy and industrial structure layout. Chief editor of "world energy development report" (annual blue book), "energy security issues" series of books and translations. He is also a member of Beijing academic degrees committee, vice President of Japan economic association, vice President of China western development promotion association, and vice chairman of China branch of world productivity federation.

Speech: Environmental health and energy structure
Energy structure refers to the composition and proportion relationship of various primary and secondary energy sources in total energy production or consumption.
Energy structure is an important content of energy system engineering research, which directly affects the ultimate use of energy in various sectors of national economy and reflects people's living standards.
This report will explore the relationship between environmental health and energy structure.

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Menas C. Kafatos is the Fletcher Jones Endowed Chair Professor of Computational Physics at Chapman University and the Director of the Center of Excellence in Earth Systems Modeling and Observations. He is a quantum physicist, cosmologist, and climate change researcher and works extensively on science issues, climate change and hazards, quantum mechanics, cosmology, consciousness and philosophy. He holds seminars and workshops for individuals, groups and corporations, including on the Earth and the environment; on natural laws that apply everywhere and are the foundations of the universe. His doctoral thesis advisor was the renowned M.I.T. professor Philip Morrison who studied under J. Robert Oppenheimer. He is foreign member of the Romanian Academy and was elected foreign member of the Korean Academy of Science and Technology. He and his Center lead extensive international collaborations with universities and research centers in different countries, including Greek, Italian, Japanese and Korean institutions. He has authored 330 articles, is author or editor of 20 books.

Speech: Wildfires at Different Scales and Climate Change
Wildfire is a key pathway for natural biomass renewal as well as a recurrent natural hazard for human communities. As warming trends of Earth's climate continue to increase, the hazard becomes more and more challenging for human communities. Besides causing life loss, devastation of communities and economic losses, wildfires affect all spatial scales and in turn seem to be affected by the Earth's changes. Although fires of natural hazards are in most cases tied to human activities, the changing environment precipitates higher incidents. In this presentation, we describe how monitoring of fire risk at local and regional scales can improve responses of societies. In particular, we give a real case example of utilizing field observation of fire risk indicators as well as optical and radiometer remote sensing imagery to study different aspects of wildfire hazards. Using ground data and space remote sensing observations, a state-of-the-art system involving data and modeling for fire risk assessment and monitoring is discussed. The experiences we gathered can be used as a prototype for addressing wildfire risk and mitigation at other parts of the world.

Dr. Zhuo Zefan, Chairman of the Board of TONG ZE GROUP

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Dr. Zhuo Zefan, an Expert with Outstanding Contributions in Shaanxi Province, is the Chairman of the Board of TONG ZE GROUP. Dr. Zhuo got his master degree in Business Administration (MBA) of Northwest University and his doctor degree in Business Administration of the USA West Coast University.

Dr. Zhuo has over 20 years' experience in business investment, finance and enterprise management. He has invested (or held the controlling share) successively in a series of growth enterprises such as Yanchang Petroleum International Limited (formerly known as "Sino Union Energy Investment Group Ltd.", company listed on the Main Board of Hong Kong Stock Exchange, stock code HK0346), China Nonferrous Metals Co., Ltd. (formerly known as "Sungreen International", company listed on the Hong Kong Stock Exchange, stock code 8306), Shaanxi JUCHUAN FUWANJIA Company Limited, Shaanxi Tong Ze Residential Engineering Technology Co., Ltd., West Movie Group Co., Ltd., Xi'an Shaangu Power Co., Ltd. etc.

At the same time, due to his commitment to the protection of soil and environment, Dr. Zhuo has persisted in leading the scientific research team to study the soil C/N ratio for many years. He has obtained seven national patent certificates for invention, and successfully established the "Carbon Matrix Nutrition Theory". On the basis of this theory, he has developed a new series of potassium fertilizer that helps the large-scale improvement of farmland soil and the quality of crop products which effectively serve the protection of the nation's soil environment and the ever-growing supply and demand of organic agricultural products.

In addition, Dr. Zhuo is a very charitable person who has a strong sense of social responsibility. Dr. Zhuo actively assume social responsibilities in many fields and serves social functions like the Honorary Director of the Education Development Foundation of Northwest Agricultural and Forestry University, the Vice President of Hong Kong Confucian Academy etc. Also he has established several public welfare organizations such as Shaanxi Chunshan Education Foundation, China Traditional Culture Exchange Foundation etc. and actively engaged in the development of education and the promotion of the Chinese traditional culture.

Speech: Environmental health and the soil
Discussion on the balance of n, p, k and c - n ratio

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Dr. Liangfu Chen is a professor and doctoral supervisor of Aerospace Information Research Institute of Chinese Academy of Sciences, deputy director of State Key Laboratory of Remote Sensing Science, and also expert who enjoys national government subsidies. He is also a member of the expert group for China State Key Research and Development Plan, the chief designer of the first earth science satellite science application system from Chinese Academy of Sciences, deputy head of atmospheric environment monitoring satellite engineering expert group, deputy director of the first professional committee of environmental optics of China, a member of the standing committee of ozone pollution control professional committee of Chinese society of environmental sciences, academic member of the key laboratory of air quality monitoring of national environmental protection region, and a member of the academic committee of Beijing key laboratory of atmospheric particulate matter monitoring technology. He developed the theory and technology system using satellite remote sensing to monitor the air quality in China and his research results supported the improvement of air quality in the Beijing Olympic Games, the Shanghai world expo, the Guangzhou Asian games, the APEC meeting in Beijing, a military parade, the G20 summit in Hangzhou and some other significant events in China. He has won two prizes of national science and technology progress award, a first prize and a second prize of provincial and ministerial science and technology progress award. In addition, he has published three monographs and more than 100 journal papers.

Speech: Multi-source Remote Sensing of Air Quality in China
The extensive development model since the Chinese economic reform results in heavy haze pollution and other air quality problems occurring on a large scale in China, and it not only seriously affects the sustainable development of society but also public health. Before 2013, our country lacked systematic monitoring in particulate matter concentration of PM2.5/PM10 and primary gaseous pollutants including NO2, SO2, O3 and CO. Satellite remote sensing could provide a long time series data of related aerosols and gaseous pollutant since corresponding instruments launched in 1999 and 2004, and support for public health research. This report introduces related satellites missions, the algorithm principle of satellite remote sensing of the amount of particulate matter and trace gases, and progress in corresponding application and research.

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Dr. GONG Jianhua is a professor at Aerospace Information Research Institute, CAS, and Director of Virtual Geographic Environments Engineering Division, National Engineering Research Center for Remote Sensing Applications, China. His research areas include cartography and geo-visualization, virtual geographical environment, health GIS, and computable man-earth relationship. He originally proposed and developed the concept and framework of virtual geographic environment (VGE), which has become an important frontier research field of geographic information science. He has published three monographs and more than 160 articles (over 60 included in the SCI) in domestic and foreign journals and conferences. The Virtual Geographic Environments Engineering Division he leads is dedicated to 3-D GIS and geo-visualization, visual analytics of spatial-temporal big data, and virtual reality and augmented reality.

Session theme: public safety

This session focuses on recent advances in geospatial information technology and system products such as satellite/unmanned aerial vehicle remote sensing, 3DGIS, spatiotemporal big data, virtual reality/augmented reality and geo-intelligent discovery and simulation, as well as their applications to public safety regarding earthquake, fire, flood, disease transmission and anti-terrorism. Through the interdisciplinary discussions among experts of geo-information technology, government managers, capital investors and professional users, the session will explore the difficulties and mechanisms of the application and industrialization of the geospatial information technology with regard to public safety, and will promote the development of digital economy and smart society.

Dr. Jianrong Kang, Dean, PhD, Professor, School of Geography, Geomatics and Planning, Jiangsu Normal University

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Dr. Jianrong Kang, professor of Jiangsu Normal University, doctoral supervisor and Dean of the School of Geography, Geomatics and Planning, is mainly engaged in the teaching and research of Surveying and mapping engineering, mining subsidence, environmental management and data processing. Members of the Professional Committee of Mine Survey and the Mining Subsidence Appraisal Committee of the Chinese Coal Society .He presided over three projects of the National Natural Science Foundation of China, one project of the Youth Foundation of Coal Science, one project of the Youth Science Foundation of Shanxi Province and two projects of the Natural Science Foundation of Jiangsu Province Department of Education; participated in three projects of the National Natural Science Foundation of China, five projects of the Coal Science Foundation and one project of the Science Foundation of Shanxi Province; undertook more than 20 enterprise projects. He has published more than 50 papers and 3 academic works. He has won one third prize of Ministry of Energy for scientific and technological progress, two second prizes of Shanxi Province for scientific and technological progress, one second prize of China Coal Industry Association for scientific and technological progress, and one prize of ten scientific and technological achievements of coal industry. One software copyright and three patents were obtained. In 2002, he was awarded the title of provincial outstanding young backbone teachers in the second phase of "Qinglan Project" in Jiangsu Province. In 2008, he was trained as a young and middle-aged academic leader of " Qinglan Project" in Jiangsu Province.

Speech: Discussion on Evaluation Method of Geological Environment of Soil Erosion Caused by Coal Mining in Mountainous Areas

Coal mining activities in mountainous areas lead to soil erosion, water pollution, geological and natural disasters and other problems, affecting the lives of local residents and environmental health. This paper takes a mining area in Shanxi province as the research object, analyzes the influence and change of mining subsidence on the surface slope and aspect of the mining area, calculates the degree of soil erosion in the mining area before and after mining respectively by using RUSLE model, and draws the soil erosion classification map. According to the results, the changes of slope gradient and slope length caused by mining subsidence and the changes of soil erosion caused by changes of topographic factors are analyzed. Through analysis, the following conclusions can be drawn: (1) The main soil erosion in the study area is slight, and the soil erosion is less obvious, but the severe soil erosion accounts for a large proportion and is mainly distributed along valleys. (2) The surface subsidence

caused by mining aggravates the degree of surface soil erosion within the mining influence range. (3) Slope change is the major factor that affects the degree of surface soil erosion caused by mining.

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Dr. Ling Peng is a professor and doctoral supervisor at the national engineering research center of remote sensing application in Aerospace Information Research Institute, Chinese Academy of Sciences, also serves as the under-secretary-general of both the smart city collaborative innovation and industry alliance and the committee of the spatial big data technology and application of China geographic information industry association. Besides, she is a member of the China communications industry association internet of things expert committee, a member of the expert committee of China smart city yearbook (2014), a member of the urban big data professional committee of China urban science research association, an industry technical expert member of the China smart city expert committee, a member of editorial board of *"Intelligent City"*.

She deeply studied the theory and technology system of the public platform about smart city spatial information and spatiotemporal big data analysis. Based on it, she hosted the public platform construction project of Changyang town, Fang Shan District in Beijing（the first batch of smart city pilot cities from MOHURD）and developed pulsating urban data analysis platform for Sino-Singapore Tianjin Eco-city (the second batch of smart city pilot cities from MOHURD).Besides, she also hosted the research equipment development project of the Chinese Academy of Sciences——developed a public support platform for Sanya receiving stations to realize environmental remote sensing monitoring and application analysis. Also she hosted a sub-topics of the National Science and Technology Support Program——China's new community security management technology and application demonstration. Therefore, she was invited to give reports at domestic and international smart city innovation forums. In addition, she has received a first prize and two second prize of provincial and ministerial science and technology progress award, and also had published 2 monographs and more than 100 papers.

At present, she leads the research and development team devote to intelligent extraction of remote sensing information and application research of smart city.at mean time, she has undertaken Beijing Science and Technology Plan Project: Rapid

collaborative sensing technology development and application for Unconventional emergency, which supposed to provide intelligence information for emergency rescue based on the remote sensing.

Speech: Artificial Intelligence based on Remote Sensing and its Application in Emergency Intervention Scenarios of Environmental Public Health

With the improvement of GF satellite Earth observation system, high-resolution remote sensing can quickly, extensively and objectively reflect urban multi-information, which is an important means of urban refined perception. Combining the advantages of artificial intelligence algorithms, the intelligent of information extraction on high-resolution remote sensing image provides accurate, efficient and objective information support for urban refined perception, which has become a research hotspot in remote sensing geographic information field. Environmental public health emergency is the focus of urban perception research, and it has the characteristics of clustering, propagation and diffusion in spatial distribution. Therefore, how to achieve the monitoring of the scope of the epidemic and strictly control the spread of pollution sources has important practical significance. Based on the current advanced artificial intelligence algorithm, by comprehensive using the remote sensing geographic data, social media data, sensors data and other multi-dimensional data, we can extract various urban features. Then, we can reveal the temporal and spatial distribution of multi-source data and explore its application in the intervention scenarios of environmental public health emergency such as assessment on the environmental public health risk, epidemic analysis and regional tracking management.

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Bipin Kumar Acharya works at the Department of Epidemiology, School of Public Health, Sun Yat Sen University, Guangzhou, China as an Associate Researcher. Bipin does research in GIS and spatial analysis, with applications in different areas of public health including disease mapping, environmental health, infectious disease modeling, and healthcare accessibility. His educational background is Cartography and GIS. He did PhD from Institute of Remote Sensing and Digital Earth, Chinese Academy of Science in 2018, M. Phil in Resources and Human Adaptation from Department of Geography, University of Bergen, Norway in 2008 and M.A from Central Department Geography, Tribhuvan University in 2003. During the PhD, he specialized in medical geography and worked extensively on spatiotemporal modeling

of dengue fever and published five high quality research papers in reputed international SCI indexed journals as a first author and co-authored few more during the PhD.

Speech: Predicting spatial distribution of dengue fever in Nepal using MODIS Time Series Seasonal Metricsand Three Machine Learning Modeling techniques
Understanding geographic distribution and mapping environmental suitability is crucial for effective prevention and control of infectious disease. Earth observation satellites provides important sources of environmental data for spatial predictions of disease distribution. Here, we used 48 MODIS time series derived seasonal environmental metrics, geo-coded occurrence point and three robust machine learning modeling techniques including MaxEnt, Random Forest (RF) and Boosted Regression Tree (BRT) to generate ecological niche model (ENM) and predict the environmental suitable areas of dengue fever distribution in Nepal and characterize the associations between environmental factors and dengue fever. In addition, an ensemble prediction by combining all three techniques was used to produce comprehensive dengue disease transmission risk map. The results revealed that all three modeling techniques performed well with a mean area under the curve (AUC) and true skill statistics (TSS) above 0.85 and 0.60 respectively in 10fold cross validation (CV) in both training and test dataset. Simulation based estimates suggest that lowland Tarai and less elevated river valleys across the hill and mountain regions of Nepal are environmentally suitable for dengue fever. Land surface temperature (LST) variable especially minimum and maximum nighttime LST (nLST) of winter, maximum nLST of monsoon and post-monsoon seasons were most important predictors on spatial distribution of dengue fever in Nepal. We conclude that remote sensing time series base seasonal environmental metric-scan improve spatial prediction of dengue and other environmental sensitive disease transmission risk. The updated spatial distribution transmission risk of dengue fever could be valuable for the evidence based dengue control and prevention strategies.

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Dr. Xin Zhang is a professor of Aerospace Information Research Institute, Chinese Academy of Sciences and director of the Environmental Health Research Office of the State Key Laboratory of Remote Sensing. He is mainly engaged in the research of digital ocean and coastal zone, and has carried out pioneering research and development of China's "digital ocean" prototype system. He has presided over 4 projects of The National Natural Science Foundation of China, presided over and participated in more than 20 projects such as the National High-tech R&D Program (863 Program) and the Science and Technology Support Program, currently is the project leader of the National key point research and invention program of the thirteenth. In addition, Dr. Xin Zhang has published more than 110 papers (including more than 30 SCI papers) and 2 English monographs in Springer, a famous international publishing house.

Speech: Coordinative Observation Technology for High Altitude Barrier Lakes

Barrier lakes are lakes formed by storing water in valleys, river valleys or riverbeds after being blocked by landslide, earthquake, debris flow and other factors. They have great potential safety hazards. When the water is stored to a certain extent, it may burst in case of strong earthquake or rainstorm, and the lake water overflows, resulting in large-scale flood disasters. In order to ensure the safety of people's lives and property in the downstream, it is very necessary to monitor the barrier lake. However, it is very difficult and time-consuming to manually monitor the barrier lake in high altitude areas due to harsh climate and steep terrain. With the development of earth observation technology, remote sensing monitoring has become one of the main ways to obtain observation data. Compared with a single satellite, multi-satellite remote sensing cooperative observation has more advantages, its spatial coverage is extensive, observation time is continuous, imaging types and bands are abundant, it can monitor and respond quickly to emergencies, and complete complex monitoring tasks. Monitoring with multi-temporal and multi-platform remote sensing satellites can obtain a variety of observation data in time, acquire key information such as water level and water storage capacity of the barrier lake, scientifically judge the situation of the barrier lake and reasonably predict its future development trend.

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Dr. Jian ZHAO is an associate professor of Chinese Center for Disease Control and Prevention, her research focused on the application of space information technology in public health. She was the principle investigator of Open fund for State Key Laboratory of Remote Sensing Science, and participated in the Special Program for Prevention and Control of Infectious Diseases, the High Resolution Earth Observation System of National Science and Technology Major Projects, National Key R&D Program. She was published 5 SCI journal papers.

Speech: 3S Practical Application in Public Health Emergency Management

3S provides efficient data acquisition, spatiotemporal analysis and mapping technologies for surveillance and situation awareness in public health emergency management, major natural foci diseases monitoring and prediction, rapid risk assessment in major natural disasters.

The report introduces the history and responsibilities of Chinese Center for Disease Control and Prevention, the public health emergency response system in CDC, and the application of 3S technology in health emergency management, plague surveillance, avian influenza H7N9 mapping and analysis, as well as rapid public health needs assessment after earthquake and flood.

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Dr. Jun SUN is a research assistant of The Aerospace Information Research Institute (AIR) under the Chinese Academy of Sciences (CAS). His research interests include UAV remote sensing, and Smart City. In recent years, he was the PI of 7 research projects, including one National-level project and one Ministerial-level project. He was also CO-PI of several other research projects, including the National Key Technology Research and Development Program of the Ministry of Science and Technology of China, National Key R&D Program and   so on. He Received 3 provincial and ministerial awards, and published more than 10 papers.

Speech: Application Progress of UAV RS and Virtual Reality Techniques in Public Safety

Compared with other remote sensing methods, UAV remote sensing technology has the advantages of low cost, flexibility, and rapid response. It can undertake high-risk missions, so the advantages of UAV remote sensing data acquisition are more obvious in terms of public safety and emergency response. Based on its unique immersive sensing characteristics, VR/AR technology is a front-end tool for human-oriented geospatial data visualization, and it can solve the problems of data acquisition and dynamic simulation of human behavior. The report introduces the current development of UAV remote sensing and VR/AR technology, proposes a new idea of comprehensively applying the above technologies to provide decision support for rapid emergency response, which can quickly acquire field data, extract topic information, and simulate dynamic processes. Finally, the specific applications of this method in disasters and pollution are introduced.

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Dr. Xuehong Sun is a Professor and Master's supervisor, Deputy Director of Ningxia Large Data and Artificial Intelligence Application Collaborative Innovation Center, Evaluation Expert of National Award Office, Member of Academic Committee of Ningxia University, Cooperative Member of Electronic Information Teaching Steering Committee of Ministry of Education, China Network Director of Space Talents Education Alliance, Deputy Director of Ningxia Communication Society, and leader of Ningxia Science and Technology Innovation Team of Intelligent Comprehensive Governance and Service Integration Technology Research and Application. The main research fields are new generation wireless communication technology and network, polarization interferometric synthetic aperture radar image processing, large data analysis and processing, etc. He is an Editorial Board of "*Journal of Communications and Information Networks*", expert reviewer of journals such as "*Journal of Electronic Science and Telecommunications Science*", etc. Relevant research results were published in the journals "*Journal of Electronic Science and China Communications*". He won the "Excellent Teacher Award" of Baogang Education Foundation in 2016, the National Postgraduate Electronic Design Competition, the "Excellent Instructor" of the Innovation and Entrepreneurship Competition for College Students, and the second prize of provincial teaching achievement in 2014 (ranked second) and more than 20 awards. In 2017, he was awarded the Science Award of China Electronics Society as "Excellent Scientist". In

the past five years, 30 academic papers have been published, 2 applications for authorized invention patents and 7 patents for utility models. 11 software copyrights have been applied for and authorized.

Speech: Application of Multi-source Image Processing in Agriculture and Environmental Monitoring

Agricultural and environmental monitoring remote sensing has always been one of the most active and successful examples of remote sensing applications in the field of remote sensing. Ground-to-air multi-source remote sensing means and information applications are attracting more and more attention. High-altitude and large-scale rapid monitoring of large-area crop growth based on Aerospace platform Estimation of chemical components is possible, but crop growth monitoring based on Aerospace platform is not deep enough and systematic. One of the limiting factors is the performance of sensors (such as spatial and spectral resolution). Microwave quantitative remote sensing is applied to agricultural and environmental monitoring, especially Pol-InSAR technology for microwave determination. Quantitative remote sensing can acquire more accurate farmland information, especially spatial three-dimensional structure information, which facilitates accurate estimation of crop growth parameters and accurate detection of crop diseases and insect pests, and becomes a more reliable and effective remote sensing information acquisition technology at regional scale. The report introduces the research and progress of satellite data modeling, image processing and data inversion.

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Dr. Li Weibin, Professor, served as the head of the key scientific and technological innovation team in Shaanxi Province, and was selected as the innovative and entrepreneurial talents in Shaanxi Province and the 100 talents plan in Shaanxi Province. Dr. Li Weibin is Vice President of Northwest Alliance of China's Big Data, Secretary-General of Shaanxi Satellite Application Industry Alliance, Vice President of Shaanxi High-Resolution Remote Sensing Application Alliance, and part-time professor of Xi'an Jiaotong University, Xidian University , Chang'an University, Xi'an University of Science and Technology. He is also Vice-Dean of the Institute of Big Data, Northwest University. Li Weibin has been engaged in the research and development of satellite remote sensing image processing, advanced satellite

navigation algorithms and simulation, space-time big data and other fields for decades. He has presided over more than 30 projects at all levels, and he has declared more than 10 patents and more than 30 software copyrights. He had awarded the first prize of science and technology in Shaanxi Province, the first prize of science and technology in Xi'an City and the first prize of science and technology in Shaanxi University. His team has made great progress in Beidou high precision positioning technology, Beidou chip designing and development, remote sensing image processing, natural resources monitoring and auditing, space-time data.

Speech: Remote Sensing, Big Data and Ecological Auditing
Eco-auditing is an important means of attaching importance to the construction of ecological civilization in the new era in China. Traditional auditing methods cannot provide real-time and accurate assessment of the stock and change of ecological resources. Based on satellite remote sensing technology, big data technology and Beidou positioning technology, the new measurement means of ecological civilization has become the necessary tool of ecological auditing. Taking several ecological auditing experiences as examples, the team has made beneficial exploration on the real-time, accurate and intelligent ecological auditing ways in China.

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Dr. Hongcun Fu is the chairman of Qingdao Baokang Agricultural Technology Co. Ltd. External Tutor, Tianjin University of Science and Technology Food Engineering and Biotechnology，Qingdao Rural Star Organic Blueberry Grower. He established the organic blueberry planting theory and the deep processing technology system. His company contributed to the supply of organic blueberry fruit and organic blueberry gold(anthocyanin) for the 2018 Shanghai Joint Organization Qingdao Summit.

Speech: Cultivation and deep processing of organic blueberries
Farmers ' traditional planting patterns are extensive, excessive use of chemical fertilizers, resulting in soil alkalization, single structure, and declining crop quality, which both pollute the environment and affect human health. Rational improvement of soil, scientific fertilizer, production of healthy organic agricultural products will be the trend of agricultural development in the future, our company's organic blueberry cultivation and deep processing technology in the forefront.

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Lining Li is an extramural academic adviser of School of Food, Tianjin University of Science and Technology, a member of Cardiopulmonary Rehabilitation Committee of China Health Management Association. Mainly engaged in the research and development and marketing of food flavors and fragrances, the research and development of special food products (special medical food), the design and construction of food, medicine and cosmetics industry, and the work of agricultural industrialization.

Speech: Eco-health and Health

Mainly expounding the definition and relationship between ecological health and health, and currently how to resolve the problems of ecological health and health in China from the technical level (certainly not necessarily). For health, how to establish China's own national health system is our 5000-year culture, treatment of future diseases. Regarding to modern culture, it is necessary to transform the system of therapeutic medicine into the system of preventive medicine and the construction of the system of community prevention for the whole people.

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Huo Jianjun is the Chairman of Spring of Almond Chengde Biotechnology Co., LTD. Representative of the Municipal People's Congress in Chengde and Pingquan City. Devoted to the mountain apricot industry, he has made a great contribution to the field of deep processing of mountain almond.

Speech: Harvesting and Deep Processing of Organic Almond

The report mainly elaborates on almond harvesting, protection of mountain forests, income from mountain forests, and how to achieve environmental protection and intensive processing of almonds.

Prof. Dr. Wang Jianming, Dean of department of Food Science and Engineering, College of Food Engineering and Biotechnology, Tianjin University of Science and Technology,

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Prof. Dr. Wang Jianming is the doctoral supervisor, and dean of the department in College of Food Engineering and Biotechnology, Tianjin University of Science and Technology. She is currently the chairman of the staff union of the college. Outsides campus, Prof. Wang serves as the managing director of the Cardiac Prevention and Rehabilitation Branch of China Health Management Association, the member of China Nutrition Society, the member of China Food and Oil Society, Professional Training Experts of Ministry of Commerce, the professional member of International Dairy Federation (IDF) China National Technical Committee.

Professor Wang Jianming undertakes the training of PhD and Master degree students majoring in Food Nutrition, Food safety, Food Science and Engineering. She has compiled professional textbooks including Food Nutrition, Food Nutrition Experiment, Food Technology and Food Biotechnology Experimental Guidance. She dedicates into the research focusing on food nutrition and processing, and is engaged in intensive processing of agricultural products, biological transformation and resource development of by-products of agricultural products, evaluation on mechanism of nutrients metabolism and functional properties. She undertakes three national research projects, nine provincial and ministerial projects and nearly 30 cooperation projects with companies. She has published more than 180 papers by the first author or correspondent author and applied for more than 20 Chinese invention patents.

Speech: Construction of Food Traceability System

Food Traceability is an information management system of connecting production, inspection, supervision and consumption to let consumers know the process of production and circulation in line with hygiene and safety, and to improve the degree of consumer confidence. China is a country with a vast of territory and with industrial complexity. Food safety issues are particularly prominent. Establishing a good and suitable food traceability system and supervising its implementation is the basic guarantee for the people. Hope that good system construction is not the beginning, but the concrete implementation!