第五届干旱半干旱环境对地观测国际会议

The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments

会 议 手 册

Conference Manual

2024 年 9 月 27-29 日 中国·新疆·喀什

September 27-29, 2024 Kashi, Xinjiang, China

Content

主办单位

可持续发展大数据国际研究中心

中国科学院空天信息创新研究院

国际数字地球学会

新疆维吾尔自治区喀什地区行政公署

承办单位

国际数字地球学会中国国家委员会

喀什中科空天信息研究院

喀什地委人才工作办公室

喀什地区行政公署外事办公室

协办单位

联合国教科文组织自然与文化遗产空间技术国际中心 (HIST)

灾害风险综合研究计划 (IRDR)

数字丝绸之路计划 (DBAR)

中国科学院 - 发展中国家科学院空间减灾卓越中心（SDIM）

GEO 寒区倡议

新疆大学

石河子大学

新疆师范大学

新疆理工学院

喀什大学

南京大学空间地球科学研究院

塔里木大学塔里木绿洲农业教育部重点实验室

中国空间科学学会空间地球科学专业委员会

遥感科学国家重点实验室

喀什市人民政府

喀什地区科技局

喀什地区发展和改革委员会

喀什地区科学技术协会

塔什库尔干塔吉克自治县人民政府

地球大地数据与可持续发展喀什重点实验室

长沙天仪空间科技研究院有限公司

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Hosted by

International Research Center of Big Data for Sustainable Development Goals (CBAS)

Aerospace Information Research Institute, Chinese Academy of Sciences

International Society of Digital Earth (ISDE)

Administrative Office of Kashi Prefecture, Xinjiang, China.

Organized by

Chinese National Committee of International Society for Digital Earth (CNISDE)

Kashi Aerospace Information Research Institute

Talent Work Office of Kashi Municipal Committee

Foreign Affairs Office of Kashi Administrative Office

Co-Organizers

International Center for Space Technology of Natural and Cultural Heritage(HIST) under the Auspices of UNESCO

Integrated Research of Disaster Risk (IRDR)

Digital Belt and Road Program (DBAR)

CAS-TWAS Center of Excellence on Space Technology for Disaster Mitigation

The GEO Cold Regions Initiative (GEOCRI)

Xinjiang University

Shihezi University

Xinjiang Normal University

Xinjiang Institute of Technology

Kashi University

Institute of Space Earth Sciences, Nanjing University

Key Laboratory of Tarim Oasis Agriculture (Tarim University)

Space Earth Science Professional Committee of the Chinese

Society of Space SciencesState Key Laboratory of Remote Sensing Science

Kashi Municipal People's Government

Development and Reform Commission of Kashi Prefecture

Bureau of Science and Technology of Kashi Prefecture

Association for Science and Technology of Kashi Prefecture

Tashkurgan Tajik Autonomous County People's Government

Kashi Key Lab of Big Earth Data and Sustainable Development

Spacety Co., Ltd. (Changsha)

欢迎辞

各位同事，

ISEO 研讨会重点讨论地球观测的各个方面，包括地球观测理论、技术的进步，以及在环境、资源、自然和文化遗产、城市地区和灾害管理中的应用。它强调地球观测在全球变化中的作用，加强科学交流与合作，并通过该平台在优先领域开展实质性的国际合作研究。

2024 年标志着联合国 2030 年可持续发展议程的新阶段，对地观测（EO）是实现可持续发展目标（SDGs）的有力工具。它为中亚等干旱半干旱区加强可持续发展目标的监测和评估提供新机遇。

我们很高兴于 2024 年 9 月 27 日至 29 日，在中国新疆喀什召开第五届干旱半干旱环境对地观测国际会议（ISEO 2024），以促进利用地球观测开展干旱半干旱区可持续发展方面的合作和共识。研讨会将以“地球观测促进干旱半干旱区可持续发展”为主题，组织对话和交流活动，包括对最新光电和数字技术、综合解决方案、应用示范和区域可持续发展经验的深入讨论。

我代表 ISEO 2024，在世界各方需要重拾信心和探索机遇的关键时刻，衷心邀请来自世界各地的专家、专业人士、从业者和学者，代表科学、工程、教育、管理、企业和社会组织齐聚喀什，与我们分享地球观测领域的最新成果和实用见解，促进合作，为干旱半干旱区的可持续发展指明方向。

第五届干旱半干旱环境对地观测国际会议主席

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Welcome Message

Dear Colleagues,

The ISEO symposium focused on various aspects of EO, including the advancement of EO theory, technology, and applications in environmental, resource, natural and cultural heritage, urban areas, and disaster management. It emphasized EO's role in global change, enhancing scientific communication and cooperation, and initiating substantive international collaborative research in priority areas through this platform.

The year 2024 marks a new phase of the United Nations 2030 Agenda for Sustainable Development. EO is a powerful tool for achieving the Sustainable Development Goals (SDGs). It offers new opportunities to enhance the monitoring and evaluation of SDGs, particularly in arid and semi-arid regions, such as Central Asia.

We are excited to convene the 5th International Symposium on Earth Observation for Arid and Semi-arid Environments (ISEO 2024) in Kashi, China, from September 27 to 29, 2024, to foster collaboration and consensus in leveraging EO for sustainable development in arid and semi-arid areas. The symposium will organize dialogue and exchange activities under the theme of "Earth Observation Facilitates Sustainable Development in Arid and Semi-arid Areas". The symposium includes in-depth discussions on the latest EO and digital technologies, comprehensive solutions, application demonstrations, and regional sustainable development experiences.

On behalf of the ISEO 2024, and during this critical moment in time when all parties in the world need to regain confidence and explore opportunities, I extend our heartfelt invitation to experts, professionals, practioners, and scholars from around the globe—representing science, engineering, education, management, enterprises, and social organizations to converge in Kashi and share with us latest achievements and practical insights in the realm of Earth observation, fostering collaboration and charting the course for the sustainable development in arid and semi-arid areas.

Chair of the 5th International Symposium on
Earth Observation for Arid and Semi-arid Environments

组织机构

大会主席

郭华东

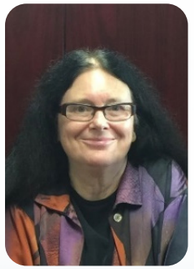
中国科学院院士、可持续发展大数据国际研究中心主任

艾尼瓦尔·吐尔逊

喀什地委副书记、喀什地区行政公署专员

科学委员会

联合主席



Gretchen Kalonji

可持续发展大数据国际研究中心（CBAS）教授、联合国教科文组织前自然科学助理总干事

肖文交

中国科学院院士、中国科学院新疆分院院长

Organization

Chairs

Huadong Guo

Director-General of the International Research Center of Big Data for Sustainable Development Goals (CBAS).

Anwar Tursun

Commissioner of the Administrative Office of Kashi Prefecture, Xinjiang

Scientific Committee

Co-Chairs

Gretchen Kalonji

Fellow of the International Research Center of Big Data for Sustainable Development Goals (CBAS), Former Assistant Director General for Natural Sciences at UNESCO.

Wenjiao Xiao

Professor, Academician of the Chinese Academy of Sciences, President of Xinjiang Branch of Chinese Academy of Sciences.

成　员

（排名不分先后）

Alisher Fatxulloyev	Balt Suvdantsetseg	徐　冰	张　兵	缪驰远	陈　方
贾根锁	丁建丽	龚健雅	Gerrit de Leeuw	Kubanychbek Zhumaliev	贾　立
Marat Nurguzhin	Michael Meadows	Mohammad Qasim Jan	王　桥	燕　琴	车　涛
陈　曦	李新武	周宇宇			

Member

(Alphabetical order by last name)

Alisher Fatxulloyev	Professor, Tashkent Institute of irrigation and Agricultural Mechanization Engineers, National Research University of Uzbekistan
Balt Suvdantsetseg	Professor, Head of Administration Planning and International Cooperation Department, Mongolian Academy of Sciences
Bing Xu	Professor, Tsinghua Universit
Bing Zhang	Professor, Deputy Director of the Aerospace Information Research Institute, Chinese Academy of Sciences (AIRCAS)
Chiyuan Miao	Professor, Beijing Normal University
Fang Chen	Professor, Deputy Director of the International Research Center of Big Data for Sustainable Development Goals (CBAS)
Gensuo Jia	Professor, Institute of Atmospheric Physics, CAS
Gerrit de Leeuw	Professor, Royal Netherlands Meteorological Institute (KNMI)
Jianli Ding	Professor, President of Xinjiang Institute of Technology
Jianya Gong	Professor, Academician of the Chinese Academy of Sciences, Wuhan University
Kubanychbek Zhumaliev	Professor, Academician of the National Academy of Sciences of the Kyrgyz Republic, the Director of the Institute of Seismology of the National Academy of Sciences of the Kyrgyz Republic
Li Jia	Professor, Aerospace Information Research Institute, Chinese Academy of Sciences (AIRCAS)
Marat Nurguzhin	Professor, Academician of the International Academy of Informatization and the National Engineering Academy of the Republic of Kazakhstan, National Center of Space Research and Technology of the Republic of Kazakhstan
Michael Meadows	Professor, President of the International Geographical Union, Distinguished Professor in the School of Geography and Ocean Sciences at Nanjing University, China
Mohammad Qasim Jan	Professor, Foreign Academician of the Chinese Academy of Sciences, Former President of Pakistan Academy of Sciences
Qiao Wang	Professor, Academician of the Chinese Academy of Engineering, Satellite Application Center for Ecology and Environment, Ministry of Ecology and Environment
Qin Yan	Professor, President of Chinese Academy of Surveying and Mapping, Vice President of International Federation of Surveyors (FIG)
Tao Che	Professor, Northwest Institute of Eco-Environment and Resources (NIEER), Chinese Academy of Sciences
Xi Chen	Professor, Academician of International Eurasian Academy of Sciences, Zhejiang University of Technology, Xinjiang Institute of Ecology and Geography (XIEG), CAS
Xinwu Li	Professor, International Research Center of Big Data for Sustainable Development Goals (CBAS)
Yuyu Zhou	Professor, The University of Hong Kong

组织委员会

主 席

陈　方	可持续发展大数据国际研究中心常务副主任
马继明	新疆喀什地区行政公署副专员

副主席

王长林	国际数字地球学会秘书长
王福刚	喀什地委组织部副部长
何自力	喀什地区行署外事办党组书记
王建平	喀什中科空天信息研究院院长

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Organizing Committee

Co-Chairs

Fang Chen	Professor, Deputy Director of International Research Center of Big Data for Sustainable Development Goals (CBAS)
Jiming Ma	Deputy Commissioner of the Administrative Office of Kashi Prefecture, Xinjiang

Vice-Chairs

Changlin Wang	Secretary General of the International Digital Earth Society
Fugang Wang	Deputy Director of Organization Department of Kashi Municipal Committee
Zili He	Secretary of the Party Group of the Foreign Affairs Office of Kashi Prefecture
Jianping Wang	Director General of the Kashi Aerospace Information Research Institute

Member 成　员

(Alphabetical order by last name) 排名不分先后

党安荣 Anrong Dang	Tsinghua University
付碧宏 Bihong Fu	CBAS
车伟涛 Weitao Che	Hong Kong University of Science and Technology (Guangzhou) (HKUST(GZ))
上官冬辉 Donghui Shangguan	NIEERCAS
闫冬梅 Dongmei Yan	CBAS
甘甫平 Fuping Gan	China Aero Geophysical Survey and Remote Sensing Center for Natural Resources
张峰 Feng Zhang	Xinjiang University
王桂周 Guizhou Wang	AIRCAS
何国金 Guojin He	AIRCAS
丁海峰 Haifeng Ding	CBAS
刘海隆 Hailong Liu	University of Electronic Science and Technology of China
Hamid Reza Ghafarian Malamiri	Yazd University
周红英 Hongying Zhou	Research Institute of Petroleum Exploration &Development
陈辉 Hui Chen	CBAS
胡斯勒图 Husi Letu	AIRCAS
蒙继华 Jihua Meng	CBAS
武建军 Jianjun Wu	Beijing Normal University
郭建平 Jianping Guo	Chinese Academy of Meteorological Sciences
王金林 Jinlin Wang	Technology and Engineering Center for Space Utilization, CAS
骆磊 Lei Luo	International Centre on Space Technologies for Natural and Cultural Heritage (HIST)
张丽 Li Zhang	CBAS

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

石利娟 Lijuan Shi	CBAS
甘霖 Lin Gan	Tsinghua University
荆林海 Linhai Jing	CBAS
梅林露 Linlu Mei	CBAS
王猛猛 Mengmeng Wang	China University of Geosciences
王猛 Meng Wang	XIEGCAS
李培军 Peijun Li	Peking University
王钦军 Qinjun Wang	CBAS
陈玉 Yu Chen	CBAS
卢善龙 Shanlong Lu	CBAS
白铁成 Tiecheng Bai	Tarim University
段伟利 Weili Duan	Xinjiang Institute of Ecology and Geography, CAS
吴文瑾 Wenjin Wu	CBAS
杨晓峰 Xiaofeng Yang	Nanjing University
于晓晶 Xiaojing Yu	Xinjiang University
欧阳晓莹 Xiaoying Ouyang	CBAS
王心源 Xinyuan Wang	HIST
徐希燕 Xiyan Xu	Institute of Atmospheric Physics, CAS
刘勇卫 Yongwei Liu	CBAS
王媛媛 Yuanyuan Wang	CBAS
邱玉宝 Yubao Qiu	CBAS
唐韵玮 Yunwei Tang	CBAS
吴昀昭 Yunzhao Wu	Purple Mountain Observatory, CAS
孙中昶 Zhongchang Sun	CBAS
张忠浩 Zhonghao Zhang	Hohai University

大会报告嘉宾

郭华东

中国科学院院士、可持续发展大数据国际研究中心主任

可持续发展大数据国际研究中心主任，中国科学院院士、发展中国家科学院院士、俄罗斯科学院外籍院士、芬兰科学与人文学院外籍院士、国际科学理事会会士。现任国际数字地球学会名誉主席、联合国教科文组织国际自然与文化遗产空间技术中心主任、“数字丝路”国际科学计划主席，以及《国际数字地球学报》和《地球大数据（英文）》主编。曾任联合国可持续发展目标技术促进机制 10 人组成员、国际数字地球学会主席和国际科学联合会数据科技委员会主席。主要从事遥感、雷达对地观测和数字地球科学研究，已发表论文 520 多篇，出版著作 26 部，获得 22 项国际和国内奖项。

Michael Meadow

国际地理联合会主席，南京大学地理与海洋科学学院特聘教授

南京大学地理与海洋科学学院教授、南非开普敦大学环境与地理科学系高级研究员，国际科学理事会会士、南非皇家科学院院士、中国地理学会会士，曾任国际地理联合会主席。在《自然通讯》、《美国国家科学院院刊》、《科学通报》、《科学进展》等期刊上发表了 300 多篇论文，研究兴趣包括物理地理学、晚第四纪环境变化、人类对环境的影响（如土地退化和沙漠化）以及可持续发展。

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

肖文交

中国科学院院士、中国科学院新疆分院院长

欧洲科学院院士、美国地质学会会士、莱布尼茨科学学会会士。曾共同负责 IGCP 592 和 IGCP 662 项目，主持中德国际会议及美国地质学会的佩恩罗斯会议。主要从事中亚及周边地区的沉积学、构造演化和大陆生长及成矿作用研究，已发表 500 多篇论文，被引用超过 35,000 次，H 指数为 85。曾获国家创新奖、何梁何利科学与技术创新奖、国家自然科学奖二等奖、新疆科学技术奖特等奖和一等奖。

Gretchen Kalonji

可持续发展大数据国际研究中心（CBAS）教授、
联合国教科文组织前自然科学助理总干事

可持续发展大数据国际研究中心（SDG 中心）研究员，曾任联合国教科文组织自然科学助理总干事。在国际科学可持续发展合作、科学与工程教育创新及高等教育系统战略强化方面有着丰富的领导经验。现任 SDG 中心特别顾问，曾任四川大学—香港理工大学灾后重建与管理学院院长、加州大学系统国际战略发展主任。曾获 2021 年中国政府友谊奖，这是对外国人对中国社会和经济发展贡献的最高荣誉。

Marat Nurguzhin

哈萨克斯坦国际信息化研究院和工程院两院院士，原哈萨克斯坦共和国数字发展、创新和航空航天部副部长

哈萨克斯坦国家工程院院士、国际信息科学院院士。现任哈萨克斯坦小卫星项目 1 号和 2 号的首席科学家。曾任哈萨克斯坦国家航天研究与技术中心董事会主席，数字发展、创新与航天副部长。

陈曦

国际欧亚科学院院士，浙江工业大学教授 / 中国科学院新疆生态与地理研究所研究员

国际欧亚科学院院士，浙江工业大学教授、中国科学院新疆生态与地理研究所研究员。主要从事干旱区水文学、水资源管理、遥感和地理信息系统研究。曾获全国先进工作者、国家科学技术进步奖、新疆科学技术进步奖、何梁何利基金科学与技术奖和全国创新争先奖等多项荣誉。已发表论文 200 余篇，出版专著 15 部，担任 Journal of Land 期刊主编。

Balt Suvdantsetseg

蒙古科学院国际合作局局长，教授

蒙古科学院行政规划与国际合作部主任、教授，主要从事可持续发展、地球系统、遥感与 GIS 应用、地方气候变化适应和环境政策研究。曾任蒙古科学院主席办公厅行政与规划部主任、霍夫德州立大学西蒙古可持续发展研究所所长、蒙古国立大学助理教授、蒙古国家发展研究院研究员。在相关领域已发表 30 多篇论文和 6 本专著。

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Keynote Speakers

Huadong Guo

Academician of the Chinese Academy of Sciences, Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS).

Guo Huadong is Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS), and a professor of Chinese Academy of Sciences (CAS) Aerospace Information Research Institute. He is an Academician of CAS, a Fellow of the World Academy of Sciences(TWAS) a Foreign Member of the Russian Academy of Sciences, a Foreign Member of the Finnish Society of Sciences and Letters,and a Fellow of the International Science Council (ISC). He presently serves as Honorary President of the International Society for Digital Earth (ISDE), Director of the International Center on Space Technologies for Natural and Cultural Heritage under the Auspices of UNESCO, Member of the ISC Global Commission on Science Missions for Sustainability, Chair of Digital Belt and Road Program (DBAR), and Editor-in-Chief of two scientific journals International Journal of Digital Earth and Big Earth Data. He served as Member of UN 10-Member Group to support the Technology Facilitation Mechanism for SDGs,President of ISDE,President of ICSU Committee on Data for Science and Technology (CODATA). Prof. Guo specializes in remote sensing, radar for Earth observation, and Digital Earth science. He has published more than 520 papers and 26 books, and is the awardee of 22 international and domestic prizes.

Michael Meadows

President of the International Geographical Union Distinguished Professor in the School of Geography and Ocean Sciences at Nanjing University, China.

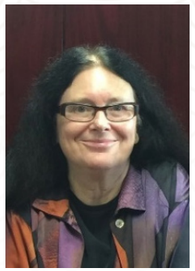
Michael Meadows is currently Professor in the School of Geography and Ocean Sciences at Nanjing University, China, but also holds the position of Senior Research Scholar in the Department of Environmental & Geographical Science at the University of Cape Town, South Africa, where he was Head of Department during 2003 to 2018. With more than 300 research publications in journals including Nature Communications, PNAS, Science Bulletin, Science Advances, Earth's Future, and The Innovation, his research interests lie broadly in the field of physical geography, especially late Quaternary environmental change, human impact on the environment in the Anthropocene, including land degradation and desertification, and sustainability. He is review editor for Land Degradation and Development. Meadows is a Fellow of the International Science Council, of the Royal Society of South Africa, and of the Geographical Society of China. He is immediate Past President of the International Geographical Union.

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Wenjiao Xiao

Academician of the Chinese Academy of Sciences, President of Xinjiang Branch of Chinese Academy of Sciences.

Wenjiao Xiao is professor at the Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences (CAS). He is a Member of the CAS and of Academia Europaea, and he is a GSA Fellow and a Member of the Leibniz Society of Sciences (Berlin). Wenjiao is a Science Editor of Geological Society of America Bulletin. He has been invited as reviewers for international funding agencies including the National Science Foundation of the United States of America, Czech Science Foundation, Chilean National Science and Technology Commission, and European Council. Wenjiao was a Co-chief of IGCP 592 and IGCP 662. He was a Chair of a Sino-German International Conference and of a Penrose Meeting of the Geological Society of America. Wenjiao has been working on the sedimentology and tectonic evolution of orogenic belts, continental growth and their metallogeny in Central Asia and surrounding areas. Wenjiao has published more than 500 papers in international journals including Science, Sci Adv, PNAS, Nat Commun, CEE, Rev Geophys, Annu Rev Earth & Planet Sci, and Geology, with 35,074 Web of Science citations (H-index 85) and 45,924 GoogleScholar Citations (H-index 98). Wenjiao won The National Innovation Medal, The Ho Leung Ho Lee Science and Technology Innovation Award, The Second Award of National Natural Science Award of China, The Special Prize and The First Award of Xinjiang Science and Technology Award, and The Huang Jiqing Award of the Geological Society of China.



Gretchen Kalonji

Fellow of theInternational Research Center of Big Data for Sustainable Development Goals (CBAS), Former Assistant Director General for Natural Sciences at UNESCO.

Gretchen Kalonji has a long-term history of leadership in international collaborations in science for sustainable development, in innovations in science and engineering education, as well as in strategic approaches to strengthening our higher education systems. Kalonji currently serves as Special Advisor to the International Center for Big Data for the Sustainable Development Goals (CBAS). She was previously the Dean of the Sichuan University – the Hong Kong Polytechnic University Institute of Disaster Management and Reconstruction, the Assistant Director General for Natural Sciences at UNESCO, the Director for International Strategy Development for the 10-campus University of California system, and as Kyocera Professor of Materials Science at the University of Washington. Kalonji is the recipient of multiple honors and awards, including, in 2021, the China Friendship Award, which is the highest honor offered to a foreigner for contributions to the social and economic development of China.

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Marat Nurguzhin

Academician of the International Academy of Informatization and the National Engineering Academy of the Republic of Kazakhstan, Former Chairman of the Board of Directors of the National Center of Space Research and Technology of the Republic of Kazakhstan.

Marat Nurguzhin, Professor, Doctor of Technical Sciences, Academician of the International Academy of Informatization and the National Engineering Academy of the Republic of Kazakhstan, Former Deputy Minister of Digital Development, Innovation and Aerospace of the Republic of Kazakhstan, Former Chairman of the Board of Directors of the National Center of Space Research and Technology (NCSRT) of Kazakhstan, Chief Scientist of the Kazakhstan Small Satellite Project 1 and 2 (currently leading the development of three small satellites).

Xi Chen

Academician of International Eurasian Academy of Sciences,
Zhejiang University of Technology/ The Xinjiang Institute of Ecology and Geography of the Chinese Academy of Sciences

Xi Chen, Academician of the International Eurasian Academy of Sciences (IEA), Professor of Zhejiang University of Technology and Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences (ZJUT/XIEG-CAS), is mainly engaged in the research of hydrology, water resources management, remote sensing and GIS in arid zones. He has been awarded the National Advanced Worker, the Special Prize of Xinjiang Scientific and Technological Progress, the Second Prize of National Scientific and Technological Progress, the Scientific and Technological Progress Prize of the Ho Leung Ho Lee Foundation, and the National Prize for Innovation and Pioneering. He has presided over 20 national 973 projects and national scientific and technological cooperation projects, published more than 200 papers and 15 monographs, and is the editor-in-chief of the SCI journal "Journal of Arid land".

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Balt Suvdantsetseg

Professor, the Head of Administration Planning and International cooperation department, Mongolian Academy of Sciences.

Balt Suvdantsetseg is the Head of Administration Planning and International Cooperation Department at MAS, with a specialization in Sustainability and Earth Systems, Remote Sensing and GIS Application, Climate Change Adaptation at local areas, and Environmental Policy Research. She has experience of working with universities, academic and policy research institutes, and her current research focuses on strategic policy development for local, regional and national level as well as trying to link scientific outputs to the policy making. She has previously occupied the roles of Head of the Administrative and Planning Department of the Presidium Office at the Mongolian Academy of Sciences, Senior Researcher at Keio Research Institute at Keio University's Shonan Fujisawa Campus, Director of the Sustainable development institute for western Mongolia at Khovd State University, Assistant Professor at National University of Mongolia, Researcher at National Development Institute of Mongolia under President Office of Mongolia, and Engineer teacher at National University of Mongolia. She has published extensively in her field, with more than 30 papers and 6 books.

Conference Notice

1 Activity Arrangements

Please refer to the conference agenda and relevant information for the schedule of all activities. Delegates are requested to attend the corresponding meetings and events accordingly.

2 Registration

Date: September 27, 2024, All Day
Venue: Lobby, First Floor, Laining Hotel, Kashi
Registration: Delegates who have completed online registration and payment can collect their registration fee receipts at the check-in desk on the day of registration. Accommodation receipts can be obtained directly from the hotel front desk.

3 Dining Arrangements

Working lunches during the conference will be arranged by the organizing committee. Meals can be taken at the hotel's buffet restaurant with meal tickets. Please note the 3-hours time difference between Kashi and Beijing.

Breakfast: 8:00-9:40 (Location: Xiyu Yuan- 西域苑 , 5th Floor, Podium building- 裙楼)
Lunch: 14:00-15:30 (Location: Xiyu Yuan- 西域苑 , 5th Floor, Podium building- 裙楼)
Welcome Banquet: Sep 28, 20:00-22:00 (Location: Performance Hall- 演艺厅 , 3rd Floor, Podium building- 裙楼)

4 Presentation Preparation

Delegates scheduled for presentations should check the schedule for their respective sessions to confirm the exact time of their presentations. For oral presentations, please email your PPT file to the session chair by September 27. Delegates who fail to submit their files on time should copy their presentation files to the designated session computer at least 30 minutes before the session begins.

5 Conference Badge and Security

Please wear your conference badge when entering and leaving the venue and take care of your personal documents and belongings. During the conference, please set your mobile phone to silent or vibrate mode.

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

6 Safety Precautions

When going out during breaks, please go in groups and respect local customs. It is advised not to visit remote areas at night. In case of emergencies, please contact the conference security personnel promptly.

7 Meeting Location

The ISEO2024 will be held at Kashi Laining Hotel (喀什徕宁饭店 , Five-star hotel, No. 160 Jianshe Road, Kashi City, Xinjiang, China)
TEL: 0998-5832222
0998-5833333
0998-5836666

8 Contact Information

Secretariat

Xinwu Li
E-mail: lixw@aircas.ac.cn.
Mobile: +86-18514529913

Qinjun Wang
E-mail: wangqj@aircas.ac.cn
Mobile: +86-13521040743

Jihua Meng
E-mail: mengjh@aircas.ac.cn.
Mobile: +86-13911012239

Jianping Wang
E-mail: wangjp@aircas.ac.cn
Mobile: +86-18009988681

Hotel Reservation

Yuanxu Ma
E-mail: mayx@aircas.ac.cn
Mobile: 15001176610

大会日程概览

日 期	时 间	地 点	日 程
9 月 27 日	全天	徕宁酒店一楼	会议注册
9 月 28 日	10:30-14:00	喀什宾馆会议中心	开幕式 主题演讲
	16:00-20:00	会议室 : 广东 - 深圳厅 裙楼六层	分会一、分会二、分会三、分会五 分会六、分会八、分会十三、分会十四
	20:00-22:00	房间 : 演艺厅 裙楼三层	会议晚餐
9 月 29 日	10:00-11:30	会议室 : 北京厅 裙楼五层	主题演讲
	11:00-14:10	会议室 : 广东 - 香港厅 裙楼五层 - 六层	分会四、分会七、分会九、分会十 分会十一、分会十二
	16:00-17:00	会议室 : 北京厅 裙楼五层	闭幕式
	17:00-18:00	中国遥感卫星地面站喀什站	参观中国遥感卫星地面站喀什站
	18:00-21:00	喀什古城	古城考察
9 月 30 日	10:00-21:00	旅行社路线	科学考察

Programme at a Glance

Date	Time	Location	Programme
Sep 27th	Full Day	1st Floor, Laining Hotel	Registration
Sep 28th	10:30-14:00	Kashi Hotel Conference Center	Opening Ceremony Keynote Presentations
	16:00-20:00	Room: Guangdong-Shenzhen 6th Floor, Podium building	Session 1, Session 2, Session 3, Session 5 Session 6, Session 8, Session 13, Session 14
	20:00-22:00	Room: Performance Hall 3rd Floor, Podium building	Conference dinner
Sep 29th	10:00-11:30	Room: Beijing 5th Floor, Podium building	Keynote Presentations
	11:00-14:10	Room: Guangdong- Hong Kong 5-6th Floor, Podium building	Session 4, Session 7, Session 9, Session 10, Session 11, Session 12
	16:00-17:00	Room: Beijing 5th Floor, Podium building	Closing Ceremony
	17:00-18:00	Kashi satellite-ground station	Kashi satellite-ground station
	18:00-21:00	Ancient City of Kashi	Ancient City of Kashi self-guided tour
Sep 30th	10:00-21:00	Route from travel agency	Scientific Expedition

9 月 28 日日程

序 号	时 间	地 点	日 程
1	9 月 28 日 10:00-14:00	喀什宾馆会议中心	开幕式 大会报告
2	9 月 28 日 16:00-20:00	广东厅 裙楼六层	分会一：地球观测、气候变化和可持续发展
3		福建厅 裙楼六层	分会二：自然和文化遗产地球观测
4		陕西厅 裙楼六层	分会三：生态系统动力学地球观测及其气候反馈
5		贵州厅 裙楼六层	分会五：构造、地质遗产、地质公园和灾害风险地球观测
			分会六：地质灾害地球观测
6		上海厅 裙楼五层	分会六：地质灾害地球观测
7		香港厅 裙楼五层	分会八：农业资源与管理地球观测
8		浙江厅 裙楼六层	分会十三：大气环境和气候变化地球观测
9		深圳厅 裙楼六层	分会十四：青年分会

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Programme on September 28th, 2024

SN	Time	Location	Programme
1	Sep 28th 10:00-14:00	Kashi Hotel Conference Center	Opening Ceremony Keynote Presentations
2	Sep 28th 16:00-20:00	Room: Guangdong 6th Floor, Podium building	Session 1:Earth Observation, Climate Change, and Sustainable Development Goals
3		Room: Fujian 6th Floor, Podium building	Session 2:Earth Observation for Natural and Cultural Heritage Conservation
4		Room: Shanxi 6th Floor, Podium building	Session 3:Earth Observation for Ecosystem Dynamics and Their Climate Feedback
5		Room: Guizhou 6th Floor, Podium building	Session 5:Earth Observation for Tectonics, Geoheritage, Geoparks and Disaster Risks
			Session 6:Earth Observation for Geological Disaster
6		Room: Shanghai 5th Floor, Podium building	Session 6:Earth Observation for Geological Disaster
7		Room: Hong Kong 5th Floor, Podium building	Session 8:Earth Observation for Agriculture Resource and Management
8		Room: Zhejiang 6th Floor, Podium building	Session 13: Earth Observation for Atmospheric Environment and Climate Change
9		Room: Shenzhen 6th Floor, Podium building	Session 14: Young and Early Career Scission

开幕式

时　　间：9 月 28 日 10:30-14:00
会 议 室：喀什宾馆会议中心
会议主席：陈方、贾根锁
出发时间：9 月 28 日 9:50
出发地点：徕宁饭店停车场

时 间	日 程	主 持
10:30-10:40	会议开始，主持人介绍参会嘉宾	陈 方
10:40-11:10	嘉宾发言	
11:10-11:30	技术合作签约仪式	
11:30-12:00	**主题演讲 1：地球大数据助力可持续发展目标** **郭华东** 中国科学院院士、可持续发展大数据国际研究中心 (CBAS) 主任	贾根锁
12:00-12:30	集体照，茶歇	
12:30-13:00	**主题演讲 2：阿尔泰构造与中亚古地理** **肖文交** 中国科学院院士，中国科学院新疆分院院长。	贾根锁
13:00-13:30	**主题演讲 3：建立合作促进干旱和半干旱环境的可持续发展 : 为建立新的伙伴关系释放机会** **Gretchen Kalonji** 可持续发展大数据国际研究中心（CBAS）特聘教授，联合国教科文组织自然科学前助理总干事。	贾根锁
13:30-14:00	**主题演讲 4：JSC NCKIT 在对地观测技术应用领域的科学活动** **Marat Nurguzhin** 哈萨克斯坦共和国国际信息化研究院和国家工程院院士，原哈萨克斯坦共和国数字发展、创新和航空航天部副部长。	贾根锁

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Opening Ceremony

Time: Sep 28th 10:30-14:00
Room: Kashi Hotel Conference Center
Co-Chairs: Fang Chen, Gensuo Jia
Departure time: Sep 28th 9:50
Departure location: Leining Hotel parking lot

Time	Programme	Host
10:30-10:40	The meeting begins, and the host introduces the attending guests	Fang Chen
10:40-11:10	Remark by Guests	
11:10-11:30	Technology Cooperation Signing Ceremony	
11:30-12:00	**Keynote speech 1:** **Big Earth Data Facilitates the Sustainable Development Goals** **Huadong Guo** Academician of the Chinese Academy of Sciences, Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS)	Gensuo Jia
12:00-12:30	Group photo, tea break	
12:30-13:00	**Keynote speech 2:** **Tectonics of the Altaids and the Paleogeography of Central Asia** **Wenjiao Xiao** Academician of the Chinese Academy of Sciences, President of Xinjiang Branch of Chinese Academy of Sciences.	Gensuo Jia
13:00-13:30	**Keynote speech 3:** **Building Collaborations for Sustainable Development of Arid and Semi-Arid Environments: Unlocking Opportunities for New Partnerships** **Gretchen Kalonji** Fellow of the International Research Center of Big Data for Sustainable Development Goals (CBAS), Former Assistant Director General for Natural Sciences at UNESCO.	Gensuo Jia
13:30-14:00	**Keynote speech 4:** **On Scientific Activities of JSC NCKIT in the Field of Remote Sensing Technologies Application** **Nurguzhin Marat** Academician of the International Academy of Informatization and the National Engineering Academy of the Republic of Kazakhstan, Former Chairman of the Board of Directors of the National Center of Space Research and Technology of the Republic of Kazakhstan.	Gensuo Jia

Session 1: Earth Observation, Climate Change, and Sustainable Development Goals

Time: Sep 28th 16:00 -19:15
Room: Guangdong, 6th Floor, Podium building
Co-Chairs: Balt Suvdantsetseg, Gensuo Jia

16:00 - 16:15	**Balt Suvdantsetseg (Invited)** **Mongolian Academy of Sciences** Climate change and rangeland adaptation in Mongolia
16:15 - 16:30	**Wenping Yuan (Invited)** **Peking University** Diverse responses of ecosystem evapotranspiration to rising atmospheric vapor pressure deficit
16:30 - 16:45	**Xiyan Xu (Invited)** **Institute of Atmospheric Physics, CAS** Ecosystem dynamics inferred from rainfall extremes in Eastern African drylands
16:45 - 17:00	**Ali Darvishi Boloorani** **University of Tehran, Iran** A Novel Method Based On Multi-Source Remote Sensing Data for High-Resolution Global Dust Source Identification
17:15 - 17:30	**Yu Shao** **China University of Geosciences** Analysis of the area change trend and driving factors of typical lakes in Xinjiang in recent 40 years
17:30 - 17:45	**Jing Wang** Institute of Oceanology, CAS Interpretable ENSO Forecasting with Deep Learning: The Role of Atmospheric Bridge and Oceanic Tunnel
Break	
17:55 - 18:10	**Xiaobin Yin** **Ocean University of China** Refined Remote Sensing of Complex Marine Environments with Spaceborne Microwave Payloads
18:10 - 18:25	**Yuan Zhou** **Tianjin University** Multimodal Typhoon Prediction with Heterogeneous Oceanic-Atmospheric Data
18:25 - 18:40	**Qing Xu** **Ocean University of China** Deep-Learning based tropical cyclone centre determination from Geostationary Satellite Images
18:40 - 18:55	**Xiaofeng Yang** **Nanjing University** Tropical Cyclogenesis Prediction and Cyclone Intensity Monitoring from Remotely Sensed Observations
18:55 - 19:15	**Co-Chairs** 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Session 2: Earth Observation for Natural and Cultural Heritage Conservation

Time: Sep 28th 16:00 -19:30
Room: Fujian, 6th Floor, Podium building
Co-Chairs: Xinyuan Wang, Anrong Dang and Lei Luo

16:00 - 16:15	**Baodang Liu** **World Heritage Expert Committee of the National Forestry and Grassland Administration, China** Status and case studies of World Natural Heritage conservation and management in China
16:15 - 16:30	**Zhaoping Yang** **Institute of Geographic Sciences and Natural Resources Research, CAS** TBD
16:30 - 16:45	**Masharykov Serdar** **Institute Archaeology and Ethnography Academy of Sciences of Turkmenistan, Turkmenistan** The protection of tangible cultural heritage is a significant component of Turkmenistan's national policy
16:45 - 17:00	**Najam us Saqib Zaheer Butt** **Aerospace Information Research Institute, CAS** Evaluating Spatial temporal changes in world cultural heritage site Taxila: core zone reduction and conservation approaches
17:15 - 17:30	**Jie Shao** **International Research Center of Big Data for Sustainable Development Goals** Automated fine heritage documentation by combining LiDAR and structured light scanner
17:30 - 17:45	**Lei Luo** **International Centre on Space Technologies for Natural and Cultural Heritage, UNESCO** Tracking land-cover changes and assessing sustainable development of Africa's Natural World Heritage Sites in Danger
Break	
17:55 - 18:10	**Jia Yang** **Beijing University of Civil Engineering and Architecture, China** Machine learning based predictive modelling of sites in the Surkhandarya River Basin
18:10 - 18:25	**Jinhui Fan** **Jiangsu Ocean University, China** Monitoring changes and analyzing biodiversity in the Okapi Wildlife Reserve towards SDG 15.5
18:25 - 18:40	**Jisi Sun** **Aerospace Information Research Institute, CAS** Monitoring and analyzing land cover change in Yala National Park, Sri Lanka with Landsat time series (2000~2022)
18:40 - 18:55	**Ruiyao Xu** **Institute of Geographic Sciences and Natural Resources Research, CAS** Analysis of Spatial Distribution Characteristics and Influencing Factors of World Heritage Tourism in Silk Road Economic Belt
18:55 - 19:10	**Aynur Mamat** **Kashi Aerosspace Information Research Institute** Temporal and Spatial Variation of Glacier Area between 1992 and 2022 in the Karakoram-Pamir Plateau
19:10 - 19:30	**Co-Chairs** 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

Session 3: Earth Observation for Ecosystem Dynamics and Their Climate Feedback

Time: Sep 28th 16:00 -19:00
Room: Shanxi, 6th Floor, Podium building
Co-Chairs: Hailong Liu, Xiaojing Yu, Xiyan Xu and Wenjin wu

16:00 - 16:15	**Xiaojing Yu** **Xinjiang University** Changes in drought stress and its impacts in global dryland ecosystems
16:15 - 16:30	**Jianhao Li** **Xinjiang University** Grassland productivity in arid Central Asia depends on the greening rate rather than the growing season length
16:30 - 16:45	**Jinzhuang Shi, Hui Li, et al.** **International Research Center of Big Data for Sustainable Development Goals** Individual Tree Crown Delineation Based On YOLOv8 Using High-Resolution Satellite Imagery Covering Arid Regions
16:45 - 17:00	**Xu Ma** **Xinjiang University** Water use strategy for vegetation- ecosystem in arid areas
17:15 - 17:30	**Hailong Liu** **University of Electronic Science and Technology of China** IoT monitoring of ecosystems in arid regions
17:30 - 17:45	**Hui Chen** **Chengdu University of Information Technology** Responses of vegetation to climate change and human activities in arid and semi-arid regions
Break	
17:55 - 18:10	**Jiao Liu, Zhenyan Yi, et al.** **SouthWest University of Science and Technology** Study on the influence of permafrost degradation on surface-air energy exchange in Tibet Plateau
18:10 - 18:25	**Hikmat Hisoriev** **Institute of Botany, Plant Physiology and Genetics, Tajikistan National Academy of Sciences** Biodiversity of arid and semiarid territory of Tajikistan and Conservation Strategy
18:25 - 18:40	**Liangliang Jiang** **Chongqing Normal University** Monitoring land degradation and assessing its drivers in Central Asia
18:40 - 19:00	**Co-Chairs** 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Session 5: Earth Observation for Tectonics, Geoheritage, Geoparks and Disaster Risks

Time: Sep 28th 16:00 - 18:00
Room: Guizhou, 6th Floor, Podium building
Co-Chairs: Bihong Fu and Qasim Jan

16:00 - 16:15	**Jin Ge, Xuhua Shi** **Zhejiang University** Paleoseismology of the Northern Kongur Shan Extensional System, NE Pamir: Implications for Potential Irregular Earthquake Recurrence
16:15 - 16:30	**Wenyuan Zhang** **Aerospace Information Research Institute, CAS** Scientific and Popularization Education Values of Seismic Relics in the Mount Kunlun UNESCO Global Geopark, Qinghai-Tibet Plateau
16:30 - 16:45	**Bihong Fu** **Aerospace Information Research Institute, CAS** Spatial Information Technology Reinforces the Sustainable Development of the UNESCO Designated Sites
16:45 - 17:00	**Chuanyong Wu** **Institute of Disaster Prevention** Active deformation and slip partitioning in the Tianshan orogenic belt
17:15 - 17:30	**Jiawei Pan, Haibing Li, et al.** **SinoProbe Laboratory, Institute of Geology, CAS** Characteristics of the surface rupture produced by a strong aftershock during the 2024 Mw7.0 earthquake sequence in Chinese Tianshan
17:30 - 17:45	**Xudong Luo** **Guangzhou NBL Imaging System Ltd.** Application of UAV-based Hyperspectral Frontier Technology in Geological Prospecting
17:45 - 18:00	**Co-Chairs** 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)
18:20 - 19:50	Session 6: Earth Observation for Geological Disaster

Session 6: Earth Observation for Geological Disaster

Time: Sep 28th 16:00-17:45
Room: Shanghai, 5th Floor, Podium building
Co-Chairs: Jianjun Wu, Qinjun Wang

16:00 - 16:15	**Jianjun Wu** **Beijing Normal University** Natural Disaster Monitoring and Emergency Response Services in China.
16:15 - 16:30	**Halimulati Abulaiti** **Kashi University** Evaluation of Ecological Sensitivity and Driving Force Analysis of Tarim River Basin
16:30 - 16:45	**Qinjun Wang** **International Research Center of Big Data for Sustainable Development Goals** A Review of Research on the Fine-Grained Sediments Stability in Debris Flow
16:45 - 17:00	**Adilai Yisimayili** **Kashi University** Risk Assessment of Trace Element Pollution from Road Dust in a typical petroleum city, Xinjiang
17:15 - 17:30	**Guo Jiang** **Xinjiang Institute of Ecology and Geography, CAS** Rapid monitoring technology of heavy metal pollution in mining area based on hyperspectral remote sensing
17:30 - 17:45	**Xiumei Ma** **Technology and Engineering Center for Space Utilization, CAS** Spectral data-driven modeling of geochemical elements applied to the Eastern Tianshan Cu-Ni mining area

Time: Sep 28th 17:55-19:10
Room: Shanghai, 5th Floor, Podium building
Co-Chairs: Fuping Gan, Yu Chen

17:55 - 18:10	**Naichen Xing** **China Aero Geophysical Survey and Remote Sensing Center for Natural Resources, China** Analysis of Lake Area Variation on the Inner-Mongolian Plateau over the Past Two Decades
18:10 - 18:25	**Qingkai Meng, et al.** **Institute of Mountain Hazards and Environment, CAS** Geological hazards identification and assessment based on an explainable nerual network model - a case study in Ili River Basin
18:25 - 18:40	**Yu Chen** **International Research Center of Big Data for Sustainable Development Goals** Post-earthquake landslides susceptibility mapping based on U-net like model
18:40 - 18:55	**Yueqi Lv** **Institute of Remote Sensing and GIS, School of Earth and Space Sciences, Peking University** Landslide mapping using multi-sensor remote sensing data and an improved one-class random forest classifier
18:55 - 19:10	**Suning Xu** **Land Satellite Application Center, Ministry of Natural Resources** InSAR Identification and Time-Series Monitoring of Loess Geohazards in Xiji County, Ningxia Hui Autonomous Region, China

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Time: Sep 28th 18:20-19:50
Room: Guizhou, 6th Floor, Podium building
Co-Chairs: Peijun Li, Jinlin Wang

18:20 - 18:35	**Kubanychbek Zhumaliev** **Institute of Seismology, National Academy of Sciences of the Kyrgyz Republic** Development of methods of optical processing of aerospace images for remote sensing of the earth for the purposes of managing agricultural and natural resources
18:35 - 18:50	**Orunbaev S.Zh.** **Environmental Sustainability and Climate Sciences, Applied Geology, American University of Central Asia, Kyrgyz** Assessing and Mitigating Flooding Hazards in Upstream Areas of the Ferghana Valley: Challenges and Opportunities for Sustainable Development
18:50 - 19:15	**Kubanychbek Zhumaliev** **Institute of Seismology, National Academy of Sciences of the Kyrgyz Republic, Bishkek, Kyrgyz Republic** Development of methods of processing acousto-optical images to solving problems in seismology
19:15 - 19:30	**Wentao Xu** **International Research Center of Big Data for Sustainable Development** A Research on the Relationship between Landslide Area Changes and Environmental Factors in the Southern Tibetan Plateau
19:30 - 19:50	**Co-Chairs** 1. Two best oral presentation award 2. One best youth oral presentation award 3. Notify three awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

Session 8: Earth Observation for Agriculture Resource and Management

Time: Sep 28th 16:00-18:20
Room: Hong Kong, 5th Floor, Podium building
Co-Chairs: Jihua Meng, Tiecheng Bai

16:00 - 16:15	**Huihan Wang** **Shihezi University** Comprehensive growth monitoring index using Sentinel-2A data for large-scale cotton production
16:15 - 16:30	**Jing Liu** **Capital Normal University** Multiple Perspectives on Food Insecurity in the Russia-Ukraine Armed Conflict: Productive, Fallow, and Abandoned Cropland
16:30 - 16:45	**Abdullaev A., et al.** **Institute of Botany, Plant Physiology and Genetics, National Academy of Sciences of Tajikistan** Influence of different arid zones on morpho-physiological indicators of soft wheat in tajikistan
16:45 - 17:00	**Sheng Chang** **Aerospace Information Research Institute, CAS** Mechanisms of Grassland Snow Disaster: Insights from Dzud Events in Mongolia
17:15 - 17:30	**Rongpeng He** **Aerospace Information Research Institute, CAS** Enhancing Regional Topsoil Total Nitrogen Mapping through Differentiated Fusion of Ground Hyperspectral Data and Satellite Images Under Low Vegetation Cover
17:30 - 17:45	**Jihua Meng** **Aerospace Information Research Institute, CAS** Supporting Precision Agriculture with Remote Sensing
17:45 - 18:00	**Zhenxin Lin** **University of Chinese Academy of Sciences** Regional Tobacco Growth Simulation based on Crop Model and Coupled Data Assimilation Algorithm
18:00 - 18:20	**Co-Chairs** 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Session 13: Earth Observation for Atmospheric Environment and Climate Change

Time: Sep 28th 16:00-20:00
Room: Zhejiang, 6th Floor, Podium building
Co-Chairs: Linlu Mei, Jianping Guo, Gerrit de Leeuw

16:00-16:20	**YongXue** **Nanjing University of Information Science & Technology** The progress of satellite remote sensing of methane
16:20-16:40	**Massimo Menenti** **Aerospace Information Research Institute, CAS** All-sky retrieval of at-surface irradiance and albedo and of their components with active and passive optical remote sensing and re-analysis data
16:40-16:55	**Kan Huang** **Fudan University** Multi-years risk assessment of human exposure to airborne dust particles in China
16:55-17:10	**Ziqiang Ma** **School of Earth and Space Sciences, PekingUniversity** A One-dimensional Variational Precipitation Retrieval Framework Applied to Chinese LEO Microwave Observations Considering Cloud Types based on GSDART
17:10-17:25	**Mehdi Nadi** **Sari Agricultural sciences and Natural Resources University, Sari, Iran** Environmental Assessment of Shadegan Wetland in the west of Iran: Analysis of Satellite Data, Water Quality and Dust Storm Pathway
17:25-17:40	**Luoqi Yang** **Hebei Technology Innovation Center for Remote Sensing and Identification of Environmental Changes** Causes and transmission characteristics of the regional PM2.5 heavy pollution process in the middle Taihang Mountain urban agglomeration
Break	
18:00-18:20	**Yalan Liu** **Aerospace Information Research Institute, CAS** Integrated monitoring by environmental and Earth observations to improve climate and biodiversity
18:20-18:40	**Gerrit de Leeuw** **Royal Netherlands Meteorological Institute (KNMI), The Netherlands** Satellite Remote Sensing shows the Effective Reduction of Aerosol and Trace Gas Concentrations over China
18:40-18:55	**Xiaojing Yao** **Aerospace Information Research Institute, CAS** Spatial modelling of fine-scale carbon emissions based on statistical inventories and multi-source data
18:55-19:10	**JieGuang** **Aerospace Information Research Institute, CAS** A long-term aerosol optical depth dataset based on AVHRR data
19:10-19:25	**Leiku Yang** **Henan Polytechnic University** MERSI aerosol retrieval over arid and semi-arid regions of northwest China using Fengyun-3 satellite
19:25-19:40	**She Lu** **Ningxia University** Time series retrieval of Multiple Aerosol parameters by adapting Transformer (TMAT) using Himawari-8 AHI data
19:40-20:00	**Co-Chairs** 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Report titles, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

Session 14: Young and Early Career Scission

Time: Sep 28th 16:00-19:00
Room: Shenzhen, 6th Floor, Podium building
Co-Chairs: Meng Wang, Sizheng Fu, Shenghui Huang

16:00-16:20	Iris Nana Obeng **University of Bologna, Italy** TBD
16:20-16:40	Shehzad Muhammad **University of Padova, Italy** Innovative Water and Ecological Solutions for Climate-Resilient Sustainable Development in Arid Xinjiang
16:40-16:55	Syed Abdullah Shah **University of Bologna, Italy** Sustainable Development Goals in Focus: Lessons from China's and Europe's Path to Net-Zero
16:55-17:10	Alice Tarozzi **University of Bologna, Italy** Microbial Diversity and Ecosystem Dynamics in the Makgadikgadi Pans: A Study on Arid Region Sustainability
17:10-17:25	Erica Luce Beghini **University of Bologna, Italy** Carbon Dioxide Removal: Enhanced Weathering
17:25-17:40	Filippo Vanzo **University of Padova, Italy** Lithium, Geochemistry, Ore Deposits and Extraction System
	Break
18:00-18:20	Davide Goffo **University of Padova, Italy** Characterization of mineralogical inclusions in Antarctic mesosiderites
18:20-18:40	Gianni Raspadori **University of Bologna, Italy** Climate Feedback in Ecosystemic Dynamics: Analysis of the Evapotranspiration through Remote Sensing
18:40-19:00	Co-Chairs 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Report titles, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Poster

Time: Sep 28th 14:00 -20:00
Room: 5th Floor, Podium building
Co-Chairs: Xiaoying Ouyang

1	Maoshan Li, Yonghao Jiang et al. **Chengdu University of Information Technology** The rules of the land-atmosphere interaction on Mt. Qomolangma (Everest) and its' influence on local weather and climate
2	Lin Liu **Institute of Heavy Rain,** Influence of aerosols on clouds and precipitation Forecast in China: based on airplane observations and simulations
3	Jinzhuang Shi, Hui Li et al. **International Research Center of Big Data for Sustainable Development Goals** Individual Tree Crown Delineation Based On YOLOv8 Using High-Resolution Satellite Imagery Covering Arid Regions
4	Hongying Zhou **Research Institute of Petroleum Exploration & Development, PetroChina** Remote sensing inversion study of modern sedimentary fan grain size based on polarized SAR data
5	Jing Wang et al. **International Research Center of Big Data for Sustainable Development Goals** A new hyperspectral pansharpening method based on Generative Adversarial Networks
6	FoJun Yao et al. **Institute of Mineral Resources Chinese Academy of Geological Sciences, China** UAV Remote Sensing alteration mineral mapping at Jinshan Gold Mine, Xinjiang, China
7	Yuanchuan Xu et al. **China University of Geosciences Beijing, China** Landslide Target Detection Using Knowledge Distillation
8	Shan Jiang et al. **China University of Geosciences Beijing, China** Identification of Crop Distributions Based on Landsat Data
9	Qian Guo **Guangzhou Meteorological Satellite Ground Station** Spatiotemporal Characteristics and Application Research on Water Conservation in the Pearl River Basin
10	Yichen Jiang **Aerospace Information Research Institute, Chinese Academy of Sciences** Coastline extraction based on ResUnet using Chinese high-resolution satellite imagery
11	Muhetaer Nijiati **Spacety Aerospace Co., Ltd, China** Exploration of the Application of Commercial SAR Satellites in Urban Infrastructure Safety Monitoring
12	Ping Tang et al. **Aerospace Information Research Institute, Chinese Academy of Sciences** Modeling of Land Surface Dynamics Driven by Time Series of Remote Sensing Satellite Images
13	Jie Guang et al. **Aerospace Information Research Institute, Chinese Academy of Sciences** The application of deep learning models in the integration of multi-source data: A case study for sea surface wind products
14	Ke Zhang et al. **Southwest University** Spatiotemporal scales of central-TP precipitation identified through in-situ soil moisture observations
15	Kai Ji **Aerospace Information Research Institute, Chinese Academy of Sciences** Interannual impact of the Victoria mode on the winter-spring surface air temperature over Eurasia and North America
16	Dacheng Wang et al. **Aerospace Information Research Institute, Chinese Academy of Sciences** Estimation of the spatiotemporal patterns of carbon storage changes in protected areas using remote sensing foundation models with optical satellite imagery and spaceborne LIDAR
17	Teng Zhao **Aerospace Information Research Institute, CAS** CNN-Enhanced Superpixel Transformer with Pixel and Superpixel-Level Feature Fusion for Water Extraction from SAR Imagery
18	Yun He **Jiangsu Ocean University** Event Argument Extraction for Rainstorm Disasters Based on Social Media: A Case Study of the 2021 Henan Heavy Rain
19	Ruijie Han **Aerospace Information Research Institute, CAS** EUNet: Edge-UNet for Accurate Building Extraction and Edge Emphasis in Gaofen-7 Images
20	Jianhao Xu **Aerospace Information Research Institute, CAS** YoloOW: A Spatial Scale Adaptive Real-time Object Detection Neural Network for Open Water Search and Rescue from UAV Aerial Imagery

9 月 29 日日程

序 号	时 间	地 点	日 程
1	9 月 29 日 10:00-11:30	北京厅 裙楼五层	大会报告
2	9 月 29 日 11:30-14:45	广东厅 裙楼六层	分会四：矿产、石油和天然气资源勘探地球观测
3		福建厅 裙楼六层	分会七：水资源与管理地球观测
4		陕西厅 裙楼六层	分会九：地球观测促进城市可持续发展和管理
5		贵州厅 裙楼六层	分会十：地球大数据服务可持续发展
6		上海厅 裙楼五层	分会十一：地球观测数据处理和信息挖掘
7		香港厅 裙楼五层	分会十二：冰雪地球观测
8	9 月 29 日 16:00-21:00	北京厅 裙楼五层	闭幕式
9		喀什地面站	喀什地面站
10		喀什古城	喀什古城自由行

Programme on September 29th, 2024

SN	Time	Location	Programme
1	Sep 29th 10:00-11:30	Room: Beijing 5th Floor, Podium building	Keynote Presentations
2	Sep 29th 11:30-14:45	Room: Guangdong 6th Floor, Podium building	Session 4: Earth Observation for Mineral, Oil and Gas Resource Exploration
3		Room: Fujian 6th Floor, Podium building	Session 7: Earth Observation for Water Resource and Management
4		Room: Shanxi 6th Floor, Podium building	Session 9: Earth Observation for Urban Sustainable Development and Management
5		Room: Guizhou 6th Floor, Podium building	Session 10: Big Earth Data for Sustainable Development Monitoring
6		Room: Shanghai 5th Floor, Podium building	Session 11: Earth Observation Data Processing and Information Mining
7		Room: Hong Kong 5th Floor, Podium building	Session 12: Earth Observation for Snow and Glaciers
8	Sep 29th 16:00-21:00	Room: Beijing 5th Floor, Podium building	Closing Ceremony
9		Kashi satellite-ground station	Kashi satellite-ground station
10		Ancient City of Kashi	Ancient City of Kashi self-guided tourism

大会报告

时　　间：9 月 29 日 10:00 - 11:30
会 议 室：裙楼五层北京厅
会议主席：陈方

10:00 - 10:30　主题演讲 1:

气候变化、土地退化与可持续发展面临的挑战：南部非洲和中国的案例研究
Michael E Meadows
国际地理联合会主席，南京大学地理与海洋科学学院杰出教授

10:30 - 11:00　主题演讲 2:

基于地球观测技术的中亚咸海盆地可持续发展研究
陈曦
国际欧亚科学院院士，浙江工业大学教授 / 中国科学院新疆生态与地理研究所研究员

11:00 - 11:30　主题演讲 3:

蒙古干旱半干旱区草地脆弱性地球观测技术及其社会经济评价研究
Balt Suvdantsetseg
蒙古科学院行政规划与国际合作局局长、教授

Keynote Presentations

Time: Sep 29th 10:00-11:30
Room: Beijing, 5th Floor, Podium building
Co-Chairs: Fang Chen

10:00 - 10:30　Keynote speech 1:

Climate Change, Land Degradation and the Challenges of Sustainable Development: Case Studies from Southern Africa and China
Michael E Meadows
President of the International Geographical Union Distinguished Professor in the School of Geography and Ocean Sciences at Nanjing University

10:30 - 11:00　Keynote speech 2:

Research on Sustainable Development of Aral Sea Basin in Central Asia Based on Earth Observation Technology
Xi Chen
Academician of International Eurasian Academy of Sciences, Professor of the Zhejiang University of Technology/ The Xinjiang Institute of Ecology and Geography of the Chinese Academy of Sciences

11:00 - 11:30　Keynote speech 3:

Earth Observation Tecgnology for Pasture Vulnerability and Its Socio-economical Assessment in Arid and Semi-arid Region of Mongolia
Balt Suvdantsetseg
Professor, the Head of Administration Planning and International cooperation department, Mongolian Academy of Sciences.

Session 4: Earth Observation for Mineral, Oil and Gas Resource Exploration

Time: Sep 29th 12:00-13:50
Room: Guangdong, 6th Floor, Podium building
Co-Chairs: Linhai Jing, Hongying Zhou, Yunwei Tang and Haifeng Ding

12:00 - 12:15	Linhai Jing, Haifeng Ding, et al. **International Research Center of Big Data for Sustainable Development Goals** Preliminary Study on Remote Sensing Exploration of Hidden Porphyry Copper Deposits in the Western Section of Gangdise
12:15 - 12:30	Xudong Luo **Guangzhou NBL Imaging System Ltd.** Application of UAV-based Hyperspectral Frontier Technology in Geological Prospecting
12:30 - 12:45	Qiyuan Xie, Linhai Jing, et al. **Fuzhou University** Pegmatite Dike Extraction Based on Deep Learning
12:45 - 13:00	Haifeng Ding, Linhai Jing **International Research Center of Big Data for Sustainable Development Goals** Granite-pegmatitic type rare metal ore-prospecting study using remote sensing technology in Koktokay area of Altai, Xinjiang
13:00 - 13:15	Nijun Jiang, Yunwei Tang, et al. **International Research Center of Big Data for Sustainable Development Goals** Potential application of tasseled cap transformation of optical remote sensing data for resources exploration
13:15 - 13:30	Hongying Zhou, Youyan Zhang, et al. **Research Institute of Petroleum Exploration and Development** Depositional features and growth pattern of large shallow-water deltas in depression basin
13:30 - 13:50	Co-Chairs 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Session 7: Earth Observation for Water Resource and Management

Time: Sep 29th 11:00-14:45
Room: Fujian, 6th Floor, Podium building
Co-Chairs: Li Jia, Shanlong Lu, Hamid Reza Ghafarian Malamiri, Weili Duan

11:00 - 11:15	Yaoming Ma (invited) **Institute of Tibetan Plateau Research, CAS** Comprehensive study of land-atmosphere interaction process and its climatic effects over the Tibetan Plateau and surrounding regions
11:15 - 11:30	Zaginaev V.V., Sakyev D.J., et al. (invited) **Mountain Societies Research Institute, University of Central Asia** Monitoring the development of potential hazardous mountain lakes using remote sensing in the Kyrgyz Republic
11:30 - 11:45	Gonghuan Fang **Xinjiang Institute of Ecology and Geography, CAS** Quantifying Glacier Accumulation and Glacier Melt in the Western Tianshan Mountains Considering Snow Redistribution
11:45 - 12:00	Long Li **Aerospace Information Research Institute, CAS** Remote Sensing Monitoring and Evolutionary Trends of Irrigated Areas and Water Use in Arid and Semi-Arid Regions of China
12:00 - 12:15	Chaolei Zheng **Aerospace Information Research Institute, CAS** Remote Sensing Evapotranspiration-based Agricultural Water Resource Management
12:15 - 12:30	Seyedkarim Afsharipour, et al. **Aerospace Information Research Institute, CAS** Developing a GUI for Benchmarking Water Productivity Using Satellite Images and the WATPRO Model: A Case Study in Arid and Semi-Arid Iran
12:30 - 12:45	Nan Jiang **China University of Geosciences (Beijing)** Estimation and validation of high spatial resolution evapotranspiration in the semi-arid region of Northeast China based on remote sensing and meteorological station data
Break	
12:55 - 13:10	Hamid Reza Ghafarian Malamiri **Department of Geography, Yazd University** Water management in a pistachio orchard in arid area of Iran using UAV images
13:10 - 13:25	Dabin Ji **Aerospace Information Research Institute, CAS** A Precipitation Estimation Method by Considering Clouds Microphysical Parameters Based on Observations from Geostationary Satellite
13:25 - 13:40	Yuke Wang **Institute of Mineral Resources, Chinese Academy of Geological Sciences** Analysis of regional precipitation changes around the Lop Nor Salt Flats and its influencing factors, 2002-2022
13:40 - 13:55	Wei Song **University of Electronic Science and technology** Analysis of segmentation method for hybrid baseflow in the middle Tianshan Mountains
13:55 - 14:10	Pinxuan Zhou **Hehai University** Analysis of streamflow Variations and Influencing Factors in the Upper Hotan River Basin
14:10 - 14:25	Zhenlei Yang **Xinjiang Institute of Ecology and Geography, CAS** Soil water transport in arid and semi-arid areas: Deterministic and stochastic modeling
14:25 - 14:45	Co-Chairs 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang (wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

Session 9: Earth Observation for Urban Sustainable Development and Management

Time: Sep 29th 11:40-14:15
Room: Shanxi, 6th Floor, Podium building
Co-Chairs: Zhongchang Sun, Zhonghao Zhang

11:40 - 11:55	**Zhongchang Sun** **International Research Center of Big Data for Sustainable Development Goals** Integrated assessment of urban sustainability: a case study of Guilin city
11:55 - 12:10	**Nijiati Muhetaer** **Spacety Co., Ltd. (Changsha)** Exploration of the Application of Commercial SAR Satellites in Urban Infrastructure Safety Monitoring
12:10 - 12:25	**Qixia Man** **Shandong Normal University** Precise identification of individual tree species in urban areas by multi-sensor UAV data in two seasons
12:25 - 12:40	**Muhetaer Nijiati, Shubo Zhang, et al.** **Spacety Aerospace Co., Ltd, China** Exploration of the Application of Commercial SAR Satellites in Urban Infrastructure Safety Monitoring
12:40 - 12:55	**Kan Huang** **Fudan University** Multi-years risk assessment of human exposure to airborne dust particles in China
12:55 - 13:10	**Huazhong Ren** **Peking University, China** Mapping sandy land using thermal infrared remote sensing data
13:10 - 13:25	**Bhagawat Rimal** **College of Applied Sciences-Nepal (CAS), Tribhuvan University, Nepal** Evaluating contributions of urbanization and climate change to urban land surface temperature change in Nepal.
13:25 - 13:40	**Mehdi Nadi** **Sari Agricultural sciences and Natural Resources University** Comprehensive assessment of environmental stresses in the Shadegan wetland: analysis of satellite data, water quality indicators, and dust storm pathways
13:40 - 13:55	**Jie Chen** **Central south university** Exploring Global Urban Characteristics and Changes through the Lens of Local Morphological Prototypes
13:55 - 14:15	**Co-Chairs** 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Presentations and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Session 10: Big Earth Data for Sustainable Development Monitoring

Time: Sep 29th 12:00-13:50
Room: Guizhou, 6th Floor, Podium building
Co-Chairs: Dongmei Yan, Li Zhang and Bing Xu

12:00 - 12:15	**Lina Cheng, Mingming Jia** **Jilin University, Northeast Institute of geography and Agroecology, Chinese Academy of Sciences** Status of global mangrove forests towards the Sustainable Development Goals
12:15 - 12:30	**Yanhong Wu** **International Research Center of Big Data for Sustainable Development Goals** Dynamics of vegetation and freshwater landscape in Northwest China under a warm-wetting climate
12:30 - 12:45	**Ting Yang** **Institute of Atmospheric Physics, Chinese Academy of Sciences** Exploration and Applications of Atmospheric Optical Vertical Remote Sensing in the Context of Carbon Neutrality
12:45 - 13:00	**Shuo Chen, Dongmei Yan** **International Research Center of Big Data for Sustainable Development Goals** A Method of Extracting Maize Northern Blight Spots based on UAV Images Serving for SDG Goal 2 Realization
13:00 - 13:15	**Yingli He, Yaqin Wang** **China Land Surveying and Planning Institude** Remote Sensing Analysis of Rice Planting Dynamics and Its Local Land Surface Temperature Impact in Key Global Regions
13:15 - 13:30	**M. M. Abdullah AlMamun, Li Zhang** **International Research Center of Big Data for Sustainable Development Goals** Cyclone surge inundation susceptibility assessment in an island of Bangladesh coast through geospatial science and machine learning algorithm
13:30 - 13:50	**Co-Chairs** 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

Session 11: Earth Observation Data Processing and Information Mining

Time: Sep 29th 12:00-14:00
Room: Shanghai, 5h Floor, Podium building
Co-Chairs: Guojin He, Guizhou Wang and Mengmeng Wang

12:00 - 12:15	**Yu Fang, Zhengjia Zhang, et al.** **China University of Geosciences (Wuhan)** Automatic landslide identification based on multi-source remote sensing data and deep learning method
12:15 - 12:30	**Ruiqing Yang, Guojin He, et al.** **Aerospace Information Research Institute, CAS** Fine Extraction of Photovoltaic Panels in Kashi Region Based on Deep Learning and Ultra-High-Resolution Remote Sensing Imagery
12:30 - 12:45	**Fangzhou Hong, Guojin He, et al.** **Aerospace Information Research Institute, Chinese Academy of Sciences** R50-ViT-upsampler based Remote Sensing Image Segmentation of Mining Area in the Qinghai-Tibet Plateau
12:45 - 13:00	**Wei Jiang, Jie Liu, et al.** **China Institute of Water Resources and Hydropower Research** Inland water quality monitoring using Sentinel-2 imagery and in situ station data
13:00 - 13:15	**Jane Ferah Gondwe, Xiuguo Liu et al.** **China University of Geosciences (Wuhan)** Comparing the performance of water indices for large-scale water resources monitoring using sentinel -2 data: a case study of Malawi
13:15 - 13:30	**Hong Jiang, Jinlan Lin et al.** **Academy of Digital China (Fujian), Fuzhou University** Integration of topographic correction and equivalent factor method for estimation ecosystem service value of mountains
13:30 - 13:50	**Mengmeng Wang, Guojin He, et al.** **China University of Geosciences (Wuhan)** A Split-window-driven Temperature and Emissivity Separation Algorithm: Derivation and application to SDGSAT-1 data
13:50 - 14:00	**Co-Chairs** 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony then send their Session Names, Award types, Names, Affiliations, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Session 12: Earth Observation for Snow and Glaciers

Time: Sep 29th 11:40 -14:00
Room: Hong Kong, 5th Floor, Podium building
Co-Chairs: Donghui Shangguan, YuBao Qiu

11:40 - 11:55	**Aamir Feroz, Xinwu Li** **Aerospace Information Research Institute, CAS** Debris-covered glaciers classification based on machine learning approach by using SDGSAT-1 over Eastern Pamir
11:55 - 12:10	**Xinkun He, Fuping Gan, et al.** **China University of Geosciences (Beijing)** A Binned Multilevel Regression Fitting Method for Monitoring Geladandong Glacier Elevation Changes from ICESat-2 Data
12:10 - 12:25	**Abhishek Banerjee, Shichang Kang** **Northwest Institute of Eco-Environment and Resources, CAS** Cryospheric changes in the era of global warming: Elevation dependent glacier area change and associated lake dynamics in the central Himalaya
12:25 - 12:40	**ASIM Qayyum butt, Donghui Shangguan** **Northwest Institute of Eco-Environment and Resources, CAS** Assessing Societal Perceptions and Adaptive Responses to GLOF and Other Multi-Hazard Risks in the Upper Indus Basin, Pakistan
12:40 - 12:55	**Meixia Wang, Donghui Shangguan** **Northwest Institute of Eco-Environment and Resources, CAS** Glacial Hazards Change in Xinjiang over Past Seven Decades: Spatio-temporal Patterns and Trends
12:55 - 13:10	**Donghui Shangguan** **Northwest Institute of Eco-Environment and Resources, CAS** Glacier flooding issues and challenges in the China-Pakistan Economic Corridor
13:10 - 13:25	**Matti Leppäranta, Lijuan Shi** **Finland** Modelling spatiotemporal variations in lake ice seasons in Eurasia
13:25 - 13:40	**Qiao Liu** **Institute of Mountain Hazards and Environment, CAS** Observed increasing glacier and glacial landsystem instability in Mt. Gongga
13:40 - 14:00	**Co-Chairs** 1. One best oral presentation award 2. One best youth oral presentation award 3. Notify two awardees to receive awards at closing ceremony, then send their Session Names, Award types, Names, Affiliations, Mobile Phone Numbers and Emails to Xiaoying Ouyang (ouyxy@aircas.ac.cn), Guizhou Wang(wanggz@aircas.ac.cn) and Xinwu Li (lixw@aircas.ac.cn)

闭 幕 式

时　　间： 9 月 29 日 16:00 - 17:00
会 议 室： 裙楼五层北京厅
会议主席： 陈方

16:00 - 16:10	会议回顾
16:10 - 16:20	对地观测促进干旱半干旱区可持续发展国际合作喀什宣言
16:20 - 16:30	《数字技术加速喀什地区可持续发展目标实现》倡议
16:30 - 16:50	颁奖仪式
16:50 - 17:00	会议总结

Closing Ceremony

Time: Sep 29th 16:00-17:00
Room: Beijing, 5th Floor, Podium building
Co-Chairs: Fang Chen

16:00 - 16:10	Conference review
16:10 - 16:20	Kashi Declaration on Promoting International Cooperation for Sustainable Development in Arid and Semi-Arid Regions through Earth Observation
16:20 - 16:30	Proposal for Accelerating the Achievement of Sustainable Development Goals in the Kashi Prefecture
16:30 - 16:50	Award presentation
16:50 - 17:00	Meeting summary

Post-Conference Excursion

Kashi satellite-ground station, Ancient City of Kashi

Sep 29th 17:00-21:00
Location：Hotel parking lot
Co-Chairs: Haifeng Ding, Hui Li

Scientific Expedition (Self payment)

Sep 30th 10:00-21:00
Location：Hotel parking lot
Co-Chairs: Haifeng Ding, Hui Li

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

General Information

International Research Center of Big Data for Sustainable Development Goals (CBAS)

In 2020, Xi Jinping, President of the People's Republic of China at the General Debate of the 75th Session of The UN General Assembly announced that China will set up an International Research Center of Big Data for Sustainable Development Goals (CBAS) to facilitate the implementation of the 2030 Agenda. At the founding conference of CBAS on September 6, 2021, Chinese President Xi Jinping sent a congratulatory letter, expressing the hope that all sides can make full use of the platform provided by CBAS to explore ways of sustainable development supported by big data, strengthen international cooperation, and make joint efforts to contribute to the implementation of the UN 2030 Agenda and the building of a community with a shared future for humanity. UN Secretary-General, António Guterres delivered a video speech, fully affirmed the role of CBAS, and hoped that CBAS would support the UN Global Platform and achieve the sustainable development goals.

CBAS (http://www.cbas.ac.cn/en/) aims to harness big data to serve the United Nations 2030 Agenda for Sustainable Development, featuring multidisciplinary research related to Earth system science, social and economic sciences, as well as sustainability science. It is devoted to the monitoring and evaluation of SDG indicators in the areas where big data plays a key role, including environmental commons, urban and peri-urbandevelopment, food security, and energy decarbonization.

To address the most challenging problems in the implementation of the SDGs, such as technological barriers and lack of data, CBAS provides a range of essential services including data sharing, technology solutions, decision-making support, a think tank, and capacity building for developing countries. CBAS works towards a vision where data is open and accessible across borders and disciplines, technology is available to support the entire policymaking process, and knowledge and ideas are communicated and grown, especially among developing countries.

Aerospace Information Research Institute (AIR), CAS

The Aerospace Information Research Institute (AIR) under the Chinese Academy of Sciences (CAS) was established in 2017 to promote the development of the aerospace information and to inspire technology innovations that can solve issues related to sustainable development. Currently AIR has nearly4,000 employees and runs two schools under the University of the Chinese Academy of Sciences, namely, the School of Electronic, Electrical and Communication Engineering and the School of Optoelectronics, training over 1,800 postgraduate students in total. AIR has 21 national- / CAS- level key laboratories as well as research centers, and conducts research from following aspects: payload and device technology; global Satellite Data Receiving Ground Station Network; remote sensing science and Digital Earth; BeiDou navigation and positioning technology; aerospace information and technology applications.The international S&T cooperation platform hosted by AIR includes: 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 Programme Office for Integrated Research on Disaster Risk (IRDR IPO) and the CASTWAS Centre of Excellence on Space Technology for Disaster Mitigation (SDIM).

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

Chinese National Committee of ISDE

The Chinese National Committee of the International Society for Digital Earth is an academic organization in the field of Digital Earth established in China, representing the country in the International Society for Digital Earth. The Committee was officially established in May 2006 and is composed of experts and scholars from relevant government research departments, universities, and enterprises engaged in the study of Digital Earth theory, technology, applications, development, education, and management. The mission of the Committee is to focus on serving the nation's economic and social development by uniting scientific and technological professionals, organizing domestic and international academic exchanges and discussions, and dedicating itself to the development of basic theories, technologies, and applications in the field of Digital Earth. The Secretariat of the Committee is located at the Aerospace Information Research Institute, Chinese Academy of Sciences.

Currently, the Committee oversees 13 specialized sub-committees, which include Digital Disaster Mitigation, Digital Heritage, Digital Mountain, Digital Agriculture, Digital Ocean, Digital Energy, Digital Polar, LiDAR Earth Observation, Imaging Spectroscopy Earth Observation, Microwave Earth Observation, Virtual Geographic Environment, Space Information Industrialization, and Spatial Earth Big Data.

Since its inception, the Committee has been committed to promoting the concept of Digital Earth and advancing and exchanging Digital Earth science and technology. It has organized a series of international and national academic conferences, establishing several influential national professional conferences, including the China Digital Earth Conference, National LiDAR Conference, National Microwave Earth Observation Conference, National Imaging Spectroscopy Earth Observation Conference, National Virtual Geographic Environment Academic Conference, National Digital Mountain Academic Symposium, and the Spatial Big Data and International Standardization Conference.

Kashi Aerospace Information Research Institute

The Kashi Aerospace Information Research Institute, approved by the Kashi Prefectural Party Committee Office of Institutional Organization, is a public institution under the Kashi Prefecture Development and Reform Commission. It is designed to meet the needs of national Belt and Road Initiative construction, the China-Pakistan Economic Corridor strategy, and the economic and social development of Xinjiang. The Institute systematically plans and organizes resources, leveraging the unique geographical advantages of the Kashi Prefecture. It focuses on research and technology development in aerospace information science and technology, space electronics, optical devices, payloads, microwave detection and remote sensing technology, optical technology and systems, remote sensing and digital earth science, laser communication, satellite measurement and control, aerospace information acquisition, reception, processing, and application, advanced aerospace flight platforms, and navigation technology.

The Institute aims to establish a platform for aerospace information, remote sensing applications, high-tech talent cultivation, and technology transfer, conducting research in key technologies, system integration, engineering, and industrialization. It is committed to serving Kashi, benefiting Xinjiang, covering western China, and extending its influence to Central Asia, positioning Kashi as a research, innovation, industry incubation center, and talent training base in the three southern prefectures of Xinjiang. The Institute's scope of business includes scientific research, remote sensing data processing and application, electronic components, BeiDou applications, laser communication, satellite ground station systems, satellite measurement and control, graduate and postdoctoral education, technology transfer, regional cooperation, academia-industry collaboration, military-civil fusion, system development and integration, international cooperation, academic exchange and training, science popularization, science tourism, and the development, promotion, service, and consultation of related software and hardware technologies.

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

地球大数据与可持续发展实验室
Lab of Big Earth Data and Sustainable Development Goal

The Lab of Big Earth Data and Sustainable Development Goal (BASL), belongs to Kashi Aerospace Information Research Institute, and was approved by Kashi Science and Technology Bureau as a " Kashi Key Laboratory" in May 2022. Facing to the major needs of the national "The Belt and Road" and the western development strategy, combining the climate, resources and environmental characteristics of arid and semi-arid areas, BASL aims to (1) develop the acquisition, processing and application technology of big data on the earth; (2) carry out monitoring and evaluation methods, technologies, and application demonstrations of regional sustainable development indicators; and (3) establish a sustainable development big data information service platform to serve regional economic and social development. The main research directions include: theoretical research on Earth big data for sustainable development, research on methods and technologies of Earth big data and sustainable development, and research on sustainable development applications and demonstrations based on Earth big data.

At present, BASL have 19 senior scientist including 9 professors and 10 associate professors. Among them, there are 1 member of the "Hundred Talents Program" of the Chinese Academy of Sciences, 3 members of the provincial and ministerial level talent program, 2 members of the Western Light Talent Program of the Chinese Academy of Sciences, and 1 member of the Chinese Academy of Sciences Youth Talent Program.

Team members have been deeply involved in the research of Earth big data theory, methods, and applications for a long time. In the past three years, 38 high-level academic papers have been published in comprehensive TOP journals, such as Science, National Science Review, and The Innovation. More than 10 invention patents have been obtained, and more than 33 national and provincial projects have been undertaken. Additionally, 5 first prizes of provincial and ministerial level scientific and technological progress (inventions) have been awarded.

第五届干旱半干旱环境对地观测国际会议
The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO 2024)

第五届干旱半干旱环境对地观测国际会议

The 5th International Symposium on Earth Observation for Arid and Semi-Arid Environments