



第九届能源、资源、环境与可持续发展国际会议

The 9th International Conference on Energy, Resources, Environment and Sustainable Development

CONFERENCE PROGRAM

Energy, Resources, Environment and Sustainable Development
in the Context of Carbon Peaking and Carbon Neutrality

May 26-27, 2022 Xuzhou, China





中国矿业大学
CHINA UNIVERSITY OF MINING AND TECHNOLOGY

Founded in 1909, the **China University of Mining and Technology (CUMT)** is one of the key national universities directly under the administration of China's

Ministry of Education. It is also a part of the nation's "211 Project" and "985 Project Innovation Platform for Disciplines of Advantage" as well as "Double First-Class Initiative". Those are all national programs designed to support and develop top institutions of higher education in China.

With a history of more than 110 years, CUMT has developed a multi-disciplinary system with a focus on mineral and mining engineering among other disciplines in sciences, engineering, arts, management and the like. CUMT has 23 schools and faculties, offering 72 undergraduate programs, 55 master's programs and 18 doctoral programs. The University has more than 3400 members of staff, including nearly 2000 academic staff. The student population is 38000.

CUMT ranked 55th in China Mainland (QS World University Rankings 2020), with Mineral and Mining Engineering ranked 14th (QS World University Rankings by Subject 2022). Earth Science, Engineering Science, Materials Science, Chemistry, Mathematics, Environmental & Ecological Science and Computer Science are in the top 1% of ESI. In the China national academic discipline assessment 2017, Mining Engineering and Safety Science & Engineering were rated the 1st place while Surveying and Mapping, Geological and Geological Engineering came as the 3rd place.

CUMT has always fostered international exchanges and cooperation with other universities overseas over the past decades. To date, the university has established partnerships with nearly 100 universities worldwide. CUMT is the co-founder of the International Higher Education Alliance for Mining, Energy and Environment, which consists of 21 member universities from 13 countries around the world. In Australia, we have established a Tourism Confucius Institute in partnership with Griffith University. The University has successfully hosted a number of international academic conferences such as the International Conference on Mining Science and Technology and so on.

Looking ahead, CUMT is positioned to become a world-class university with energy and resource characteristics.





China National Coal Group Corporation (abbreviated as China Coal Group) is a key state-owned enterprise which is under the jurisdiction of the State-owned Assets Supervision and Administration Commission of the State Council. Its predecessor was China National Coal Import and Export Corporation established in July, 1982. Its major businesses include coal production and trade, coal chemical, power generation, coal mine construction, coal mining equipment manufacturing and relevant engineering services, covering the whole coal industry chain. China Coal Group shoulders the important mission of ensuring national energy security. The existing controllable coal reserves exceed 76 billion tons, and more than 70 coal mines are in production or under construction, with a total coal production capacity of 300 million tons and an annual trade volume of 360 million tons. The total production capacity of coal to chemical products approaches 18 million tons, which are mainly comprised of olefin, methanol, urea, ammonium nitrate, coke, etc. There are more than 50 holding and participating power plants with a total installed capacity of over 28.5 million kilowatts. The comprehensive strength, technical level and market share of coal mine design and construction and coal machinery equipment manufacturing rank in the forefront of the industry. China Coal Group owns 3 listed companies as China Coal Energy Company Limited, Shanghai Datun Energy Resources Co., Ltd. and China Coal Xinji Energy Co., Ltd. By the end of 2021, China Coal Group had total assets of 502.3 billion yuan and 130,000 employees, ranking among the Fortune Global 500 companies for two consecutive years.

During the 14th Five-year Plan period and the coming period, guided by Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era, China Coal Group will fully implement the new energy security strategy of "4 Revolutions and 1 Cooperation", focus on the implementation of "Carbon Peaking, Carbon Neutrality" targets, and make overall plans to ensure national energy security and green and low-carbon transition. It will adhere to the development idea of "Efficiency Improvement of Current Business, Transformation of New Business" to build and improve a high-quality development industrial pattern with coal industry as cornerstone, coal derived clean and efficient transformation and utilization industry and comprehensive energy service industry as two wings, and such strategic emerging industries as new energy as important growth poles. Through the "Three-step" strategic arrangement, China Coal Group will build a world-class energy enterprise with complementary energy, green and low-carbon, innovative demonstration and modern governance by 2035.



The University of Kentucky is a public, research-intensive university founded in 1865. UK's campus covers more than 716 acres in Lexington, Kentucky, and is home to more than 31,000 students and over 2,000 full time faculty members. The university comprises 17 colleges with more than 200 academic programs, and a

graduate school. In recent years, UK has received nearly 100 national rankings for excellence in academics, research, health care, and economic development. U.S. News and World Report ranks several of UK's graduate programs among the nation's best. The missions of UK: facilitates learning, informed by scholarship and research; expands knowledge through research, scholarship and creative activity; and serves a global community by disseminating, sharing and applying knowledge.



West Virginia University (WVU) is a public, research university founded in 1867 with its main campus in Morgantown, West Virginia. The Morgantown campus is located in a town named "No. 1 Small City in America" for its exceptional quality of life. Morgantown campus offers more than 350 bachelor's, master's, doctoral, and professional degree programs throughout 14 colleges and schools. The student population in all the three campuses is nearly 30,000. WVU is credited by the Higher Learning Commission and many programs hold specialized accreditation. WVU maintains its very high research activity rank among the nation's elite research institutions(R1) as reflected in the Carnegie Classification of Institutions of Higher Education.



UNIVERSITY OF WOLLONGONG AUSTRALIA

The University of Wollongong

(UOW) is an Australian public research university founded in 1951 and located in the coastal city of Wollongong, New South Wales, approximately 80 kilometres south of Sydney. UOW offers 450 degree

programs across all levels of study (undergraduate and postgraduate coursework and research), as well as English language and academic bridging programs through UOW College. The university currently has more than 30,000 students (including over 10,000 international students from 134 countries), and over 2,400 staff members. The

University of Wollongong ranked 24th among the world's best modern universities in Times Higher Education Young University Rankings 2021 and is Top 1% of the world's universities in QS Graduate Employability Rankings 2022.



Founded in 1773, **Saint Petersburg Mining University** has the status of a particularly valuable cultural heritage site of the Russian Federation. Mining University is located in historical center one of the most beautiful cities in the world- St. Petersburg. Since 2009, Mining University has been one of the National Research Universities in Russia. According to 2022 QS World University Rankings, St. Petersburg Mining University is ranked 7th in the field of "Engineering – Mineral and Mining" and is included in the TOP-20 of the best engineering and technical universities in the world.

Today Saint-Petersburg Mining University offers all academic cycles, bachelor's, master's and specialist's profiles for future employees of Russian and International companies engaged in estimation, prospecting, exploitation, exploration and processing of raw materials, oil, gas, diamonds, ores. It has 1363 faculty staff and over 7,000 students with a total of 869 international students



The AGH University of Science and Technology, established in 1913 in Krakow, is a modern state university of national reach, which develops collaboration with colleges and universities in Europe and all over the world. The AGH University of Science and Technology is a technical university where exact sciences are strongly represented, and at the same time they constitute basis for the development of a maximum spectrum of applied sciences and the gradually increasing role of humanities. In line with global trends, The AGH University of Science and Technology creates new fields of study, but at the same time keeps the conventional ones, which are indispensable for a proper development of science, technology and economy of the country.

With over 260 academic institutes organized in nine departments, **RWTH Aachen University** is among the leading European institutions of higher education and scientific research. Currently,

47,269 students are registered in at least one of the 170 study programs that the university offers. Among these students, 13,354 internationals come from 138 different countries.



Students at the university benefit from the advanced research facilities that RWTH Aachen University has to offer. The work of its research centers is closely oriented towards the current needs of society and industry. This leads to numerous inventions that are patented by the university and are marketed by international companies. The competence centers of RWTH Aachen University achieve very effective cross-subject, inter-departmental collaboration in interdisciplinary networks while maintaining a high level of specialization and differentiation in their particular fields of expertise.

In addition, the University's innovative capacity is further reflected in the high number of business startups that implement research originating at RWTH Aachen University (currently more than 1,400). As a result, around 32,000 jobs have been created in the region in the last 25 years. Many new products and services originated from Aachen.



**Technische
Hochschule
Georg Agricola**

Technische Hochschule Georg Agricola, the oldest university of Bochum lies right at the heart of the city. As early as 1816, the first students completed their training in mining engineering. Today, THGA develops its heritage with a view to the future: in our practical study

programmes, we make use of our industrial roots providing young women and men with the know-how needed to solve the engineering challenges of tomorrow and the days after.

The history of THGA is representative of the structural change the city of Bochum has gone through, changing from a rural parish to a centre of the coal and steel industry and then to a multifaceted hub of knowledge and talent – industrial work is rooted in engineering knowledge and vice versa. Likewise, THGA moved on from its mining roots: today, the former mining college of Bochum is an innovative engineering university with new focal points in its three departments Geo-Resources and Process Engineering, Mechanical Engineering and Material Sciences, and Electrical Engineering, Information Technology and Business Engineering.



Quang Ninh University of Industry, whose forerunner was Mining Technical School, was established on November 25, 1958. On July 24, 1996, the Prime Minister decided to upgrade the School into a Mining Technical College; On December 25, 2007, the Prime Minister signed the Decision to upgrade the Mining Technical College into Quang Ninh University of Industry.

Over 64 years of training, striving and development activities, the University has trained 60,000 officials and technical workers, fostered over 1000 production commanders serving 38 provinces, cities and many other ministries and branches, who facilitated the country's coal production. Currently, the university has 450 officials, lecturers, employees, of which the number of permanent lecturers is 253.

The mission of Quang Ninh University of Industry is to be a multi-disciplinary university with creative knowledge and advanced technologies; train high-quality human resources to meet the industrialization and modernization cause and socio-economic development needs of Vietnam.



Universitas Pembangunan Nasional “Veteran” Yogyakarta (UPNVY) is one of the finest state universities in Yogyakarta. Founded by the Indonesian veterans in 1958, UPNVY has distinctive values such as discipline, fighting spirit, creativity, nationalism, and excellence. Moreover, the university has a great motto called “Widya Mwat Yasa” from Sanskrit language, which means science that has been acquired shall be utilized and dedicated towards the development of a just and prosperous Indonesian society.

On national level, UPNVY has been accredited “B” by the National Accreditation Board in 2013. The university is renowned as the best university in mineral technology. However, there are also many more reputable majors such as industrial engineering, environmental engineering, agro technology, economics, international relations, communications and others. Today, 13558 undergraduate students and 469 master students are putting their beliefs in 632 teaching staff of UPNVY for their better future; and 48433 alumni are widely spread all over the country.

La Universidad Católica de Salta (UCSAL), founded in 1963, is a private, Catholic confessional, non-profit higher education institution in Salta, Argentina, with the highest degree of autonomy



UCASAL
UNIVERSIDAD CATÓLICA DE SALTA

granted by current legislation in the Argentine university system. The university comprises 14 colleges, 10 research institutions, and more than 200 academic programs across undergraduate and postgraduate coursework and research. UCSAL currently has more than 11,000 students plus over 12,000 distance learning students.



Lappeenranta University of Technology (LUT) is a pioneering science university in Finland, bringing together the fields of science and business since 1969. Clean energy and water, circular economy and sustainable business are the key

questions of humankind to which LUT seeks solutions through technology and business. Our international community is composed of approximately 5,750 students and 1,028 experts engaged in scientific research and academic education.

LUT has a tradition of strong links with the business community. The Finnish business journal "Talouselämä" has ranked LUT as the best university in business technology cooperation in Finland. We promote business generated by scientific research. This is demonstrated by the university's own investment company Green Campus Innovations, which supports LUT's research-based start-up companies.

We aim to be a forerunner in education by securing international quality labels for our degree programmes as a sign of excellence in the teaching. LUT values: the courage to succeed, the passion for innovation through science, and the will to build well-being.



United Nations
Educational, Scientific and
Cultural Organization



International Competence Centre
for Mining-Engineering Education
under the auspices of UNESCO

On March 7, 2018, an agreement was signed in Paris on the establishment of an **International Competence Center for Mining-Engineering Education under the auspices of UNESCO** on the basis of St. Petersburg Mining University. The document was signed by the Russian Energy Minister Alexander Novak, and by the UNESCO Director-General Audrey Azoulay. The purpose of the Center is to create conditions for the mobility of students, postgraduates and leading specialists, to unify educational and professional standards, to form a unified system of international professional certification for the title of "Professional Engineer" with the presence of industrial experience.

The Mission of the Centre is to promote principles of sustainable development in support of UNESCO global priorities with regard to the mineral resources sector of the economy at the national and international levels.

The Mission of the Center is implemented by means of:

- ✧ Advancement of higher education systems, technical and vocational education and training in the mineral resources sector of the economy (as constituent parts of lifelong education), including the entire volume of essential knowledge, skills and experience which contribute to mining engineering specialists integration into the international professional environment;
- ✧ Development of an integrated system for international professional competence assessment with certification of mining engineering specialists (engineers) and executives employed at enterprises of the mineral resources sector.



China Coal Society (CCS) is an academic social group of scientific and technological workers in the coal industry formed with the approval of China Association for Science and Technology (CAST). As one of national organizations under CAST, it consists of 34 branches, basically covering all coal-related professional and technical disciplines, such as geology, mining, washing, equipment, management, and guides the operations of 21 provincial coal societies in China.

CCS has sponsored 2 scientific and technological journals, Journal of China Coal Society and International Journal of Coal Science & Technology, and 1 popular science journal, Modern Miner. Important awards won by CCS include Science and Technology Award of China National Coal Association, Coal Youth Science and Technology Award, the Excellent Paper on Technological Innovation of Young People on the Front Line of National Coal Industry Production, etc.

CCS has become a bridge and link between the Party and the government to contact with scientific and technological workers in the coal industry, and also an important force for the prosperity and development of coal science and technology.

Since its establishment, CCS has done a lot of work in providing consultation and suggestions for government agencies on major decisions, serving social and economic development, undertaking transferred functions of the government, promoting the transformation and application of scientific research achievements, carrying out science popularization and social services, etc. CCS has also been awarded such titles as 5A Grade of Social Organization Evaluation by the Ministry of Civil Affairs, the Excellent Unit of Innovation-driven Assistance Project of CAST, and the Advanced Collective of National Association for Science and Technology System.



International Green Building Alliance was founded in 2017 in Nanjing, China. The Alliance provides an exchange platform for experts and scholars, research and design institutions and enterprises all over the world who are committed to green building development, promotes international exchange and cooperation on green building as well as the promotion and application of green building related technologies and products. As an innovative platform for international exchange and cooperation on global green building development, the Alliance is committed to realizing the integration of green building concepts, technology connectivity, standard universality and talent exchange under the principles of openness, inclusiveness, exchange, mutual learning and win-win cooperation, and contributing professional wisdom to the high-quality development of green building and the green and low-carbon development of urban and rural construction.



**International Higher Education Alliance for Mining,
Energy and Environment**

Energy, resources and environment are essential to human progress and will remain a permanent theme for sustainable development. Based on a common understanding that scientists and universities play an increasingly important role in solving problems in mining, energy, alternative resources and environment, on October 17, 2009, a batch of world leading universities in these fields gathered at China University of Mining and Technology (CUMT), in Xuzhou of China, and jointly initiated and established the **International Higher Education Alliance for Mining, Energy and Environment (AMEE)** based on principles of equality and mutual benefit. AMEE is committed itself to cooperation in education, research and social services. As of now, the alliance consists of 21 universities globally, which are all renowned for education and research in the field of energy.



Founded in 1990, **International Journal of Mining Science and Technology (IJMST)** (ISSN 2095-2686; CN 32-1827/TD) is a bimonthly journal published at home and abroad, under the supervision of the Ministry of Education of the People's Republic of China and sponsored by China University of Mining and Technology.

IJMST mainly publishes original achievements in the world's cutting-edge research fields involving mining related disciplines, such as mining engineering, safety engineering, mineral processing, rock mechanics and geotechnical engineering, geological engineering, mining environment and sustainable development, etc., disseminating advanced mining science theories and promoting the innovative development of mining science and technology.



The IJMST Editorial Board is composed of 73 members from 19 countries, including the United States, the United Kingdom, Australia, Canada, and Germany, etc., and the proportion of international editorial board members has reached 82.4%. IJMST has been included in many internationally important databases and retrieval systems: Science Citation Index Expanded (SCIE), Ei Compendex, Scopus database, Chemical Abstracts (the United States), Abstracts Journal (Russia), Cambridge Scientific Abstracts (the United States), Coal Abstracts (the United Kingdom) and China Science Citation Database (CSCD).

According to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics, the Citescore 2020 measurement index released by Elsevier Scopus database, the Grading Catalogue of High-quality Scientific and Technological Journals in Different Fields in China issued by China Coal Society and Geological Society of China under China Association for Science and Technology, the impact factor of IJMST is 4.084 (top 4 in the world, top 1 in China among similar journals), and the CiteScore index is 8.1 (top 5% in the world, top 1 in China), ranking in the Q1 area of JCR and the T1 rank of the grading catalogue of high-quality scientific and technological journals in the two fields of coal and geoscience.



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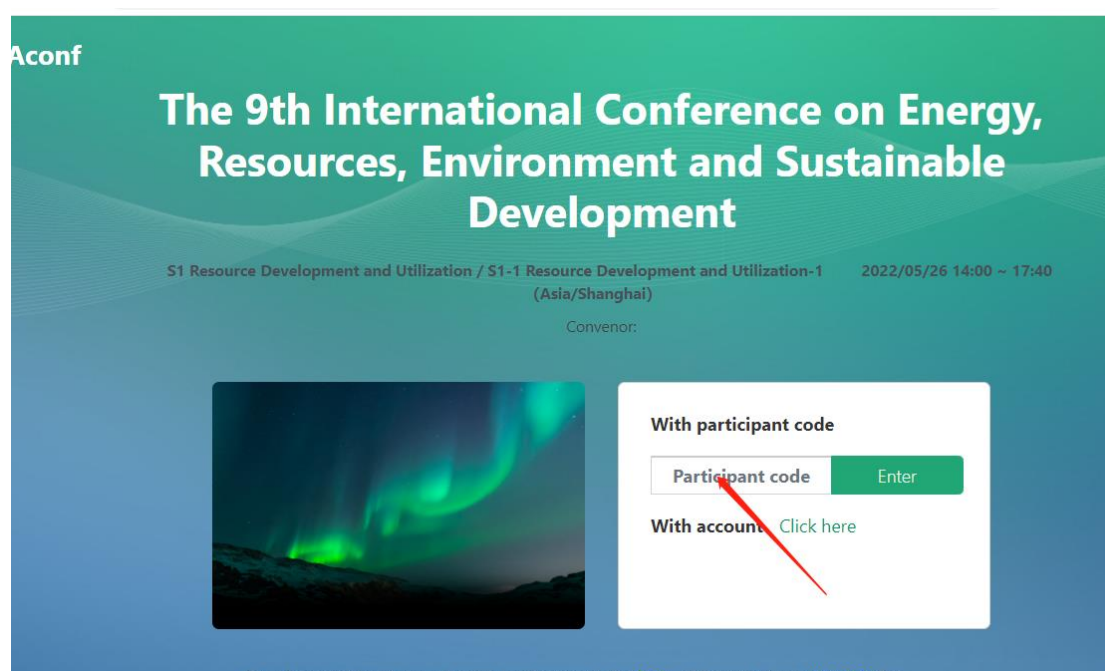
Participation Instructions

1. Download Zoom:

https://www.zoom.us/download#client_4meeting

2. Join a session meeting:

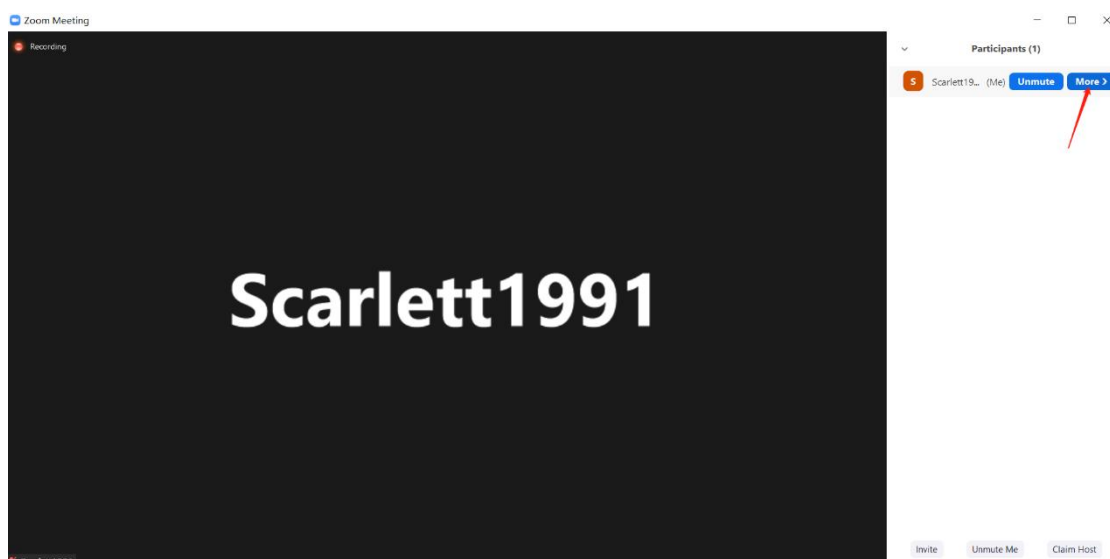
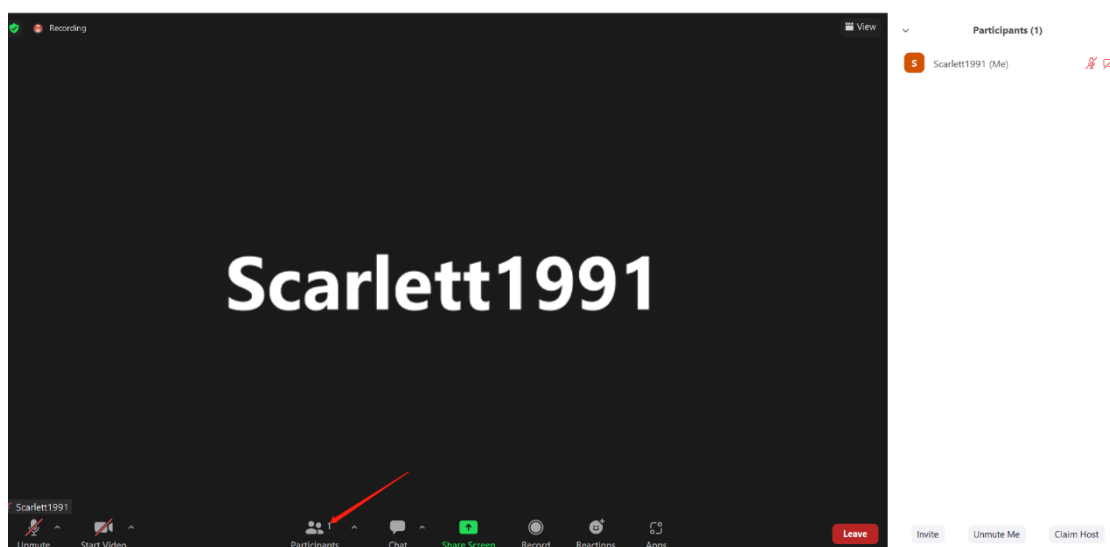
- 1) Find your session program on <http://eresd.cn/en-us/timetable.html>
- 2) Find specific session, click to program details
- 3) Click **Enter meeting room**
- 4) Enter your participant code



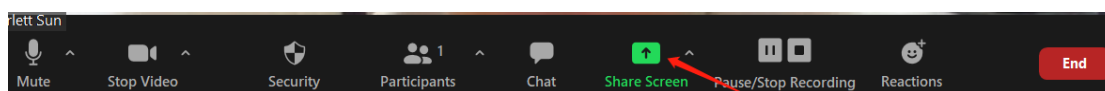
- 5) The Participant Code will be sent to your register email. Please pay attention to your email.

3. After you enter the meeting room

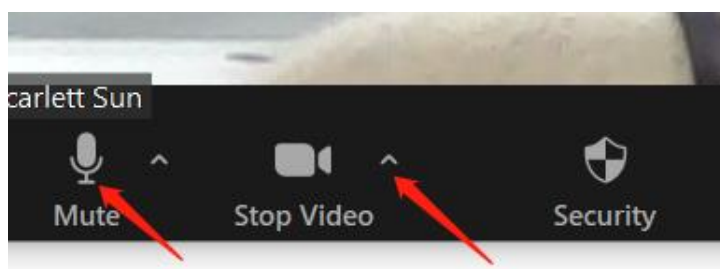
- 1) Please change your name to your real name



2) Click “Share Screen”, to share you report file, if you need to give a speech.



3) Pay attention: please keep Mute or Video open when you give a speech.





About the Conference

➤ Introduction

Hosted by the China University of Mining and Technology (CUMT), the 9th International Conference on Energy, Resources, Environment and Sustainable Development (ERESD 2022) will be held



International Conference on
Energy, Resources, Environment
and Sustainable Development

virtually on May 26-27, 2022. It is an event focusing on the latest research developments in the fields of energy, resources, environment and sustainable development as well as the opportunities and challenges we face today. It aims to provide a unique forum for in-depth exchanges among all participants from industry, government and academia throughout the world.

The International Conference on Energy, Resources, Environment and Sustainable Development (ERESD) was formerly known as the International Conference on Mining Science and Technology (ICMST), which was initiated by CUMT as early as 1985. As of the year 2015, the conference has been held for seven consecutive sessions, producing extensive international influence. The ICMST represents the advanced level in the field of mining science and technology both at home and abroad. In 2019, on the occasion of the 110th anniversary of CUMT, the conference was held and renamed as the International Conference on Energy, Resources, Environment and Sustainable Development (ERESD), for the purpose of addressing broader sustainable development issues in the fields of energy, resources and environment, including mining science and technology. From the perspective of historical heritage, the ERESD is to follow up the number of sessions held by the ICMST. The 9th session of the ERESD is held in 2022.

➤ Details

Conference date:

May 26-27, 2022

Form of Conference:

Online

Hosted by:

China University of Mining and Technology

Co-hosted by:

China National Coal Group Corporation

Co-organized by:

University of Kentucky (USA), West Virginia University (USA), University of



Wollongong (Australia), Saint Petersburg Mining University (Russia), AGH University of Science and Technology (Poland), RWTH Aachen University (Germany), TFH Georg Agricola University (Germany), Quang Ninh University of Industry (Vietnam), University of Pembangunan Nasional Veteran Yogyakarta (Indonesia), Catholic University of Salta (Argentina), Lappeenranta University of Technology (Finland)

Supported by:

International Competence Center for Mining-Engineering Education under the Auspices of UNESCO, China Coal Society, International Green Building Alliance, International Journal of Mining Science and Technology, International Higher Education Alliance for Mining, Energy and Environment

➤ **Conference Theme**

Energy, Resources, Environment and Sustainable Development in the Context of Carbon Peaking and Carbon Neutrality

➤ **Session Topics**

1. Resource Development and Utilization
2. Environmental Science and Engineering
3. Energy and Sustainable Green Development
4. Energy Science and Technology
5. Intelligent Equipment and Technology
6. Occupational Safety and Health
7. Mineral Materials and Advanced Energy Materials
8. Public Security and Emergency Management
9. Clean Processing and Conversion of Energy Resources
10. Resource Development and Utilization of Underground Space
11. Green and Low-carbon Technology for Urban and Rural Construction

Conference Organizations

➤ **Chairman**

Xuefeng SONG Professor and President of China University of Mining and Technology

➤ **Academic Committee**



Minggao QIAN	Academician of the Chinese Academy of Engineering, Professor of China University of Mining and Technology
C.C. Chan	Academician of the Chinese Academy of Engineering, Fellow of the Royal Academy of Engineering, U.K.
Yitai QIAN	Academician of the Chinese Academy of Engineering, Professor of University of Science and Technology of China
Shining ZHOU	Academician of the Chinese Academy of Engineering, Professor of China University of Mining and Technology
Heping XIE	Academician of the Chinese Academy of Engineering, Former President of Sichuan University
Chuanyao SUN	Academician of the Chinese Academy of Engineering, Chief Scientist of BGRIMM Technology Group
Suping PENG	Academician of the Chinese Academy of Engineering, Professor of China University of Mining and Technology (Beijing)
Jiongtian LIU	Academician of the Chinese Academy of Engineering, President of Zhengzhou University
Liang YUAN	Academician of the Chinese Academy of Engineering, President of Anhui University of Science & Technology
Guangzhou QIU	Academician of the Chinese Academy of Engineering, Professor of Central South University
Changwen MIAO	Academician of the Chinese Academy of Engineering, Chairman of International Green Building Alliance, Professor of Southeast University
Meifeng CAI	Academician of the Chinese Academy of Engineering, Professor of University of Science and Technology Beijing
Manchao HE	Academician of the Chinese Academy of Engineering, Professor of China University of Mining and Technology (Beijing)
Dazhao GU	Academician of the Chinese Academy of Engineering, Director of State Key Laboratory of Water Resources Protection and Utilization of Coal Mining
Hongpu KANG	Academician of the Chinese Academy of Engineering, Chief Scientist of China Coal Technology & Engineering Group
Zhongmin LIU	Academician of the Chinese Academy of Engineering, Director of Dalian Institute of Chemical Physics, Chinese Academy of Science
Qiang WU	Academician of the Chinese Academy of Engineering, Professor of China University of Mining and Technology (Beijing)
Xiaowei HUANG	Academician of the Chinese Academy of Engineering, Chief Scientist of GRIMM Group Corporation Limited
Zuoren NIE	Academician of the Chinese Academy of Engineering, President of Beijing University of Technology
Guofa WANG	Academician of the Chinese Academy of Engineering, Chief Scientist of China Coal Technology & Engineering Group
Liyuan CHAI	Academician of the Chinese Academy of Engineering, Dean of School of Metallurgy and Environment, Central South University
Xiating FENG	Academician of the Chinese Academy of Engineering, President of Northeast University
Shucai LI	Academician of the Chinese Academy of Engineering, Vice President of Shandong University
Shou PENG	Academician of the Chinese Academy of Engineering, Chairman of Triumph Science & Technology Group, Dean of Bengbu Glass Industry Design and Research Institute of China Building Materials
Shirong GE	Academician of the Chinese Academy of Engineering, President of China University of Mining and Technology (Beijing)



Tao JIANG	Academician of the Chinese Academy of Engineering, Professor of Central South University
Zhengchang SHEN	Academician of the Chinese Academy of Engineering, Chief Scientist of BGRIMM Technology Group
Jingxu ZHU	Academician of the Royal Canadian Academy of Sciences, Academician of the Academy of Engineering, Professor of the University of Western Ontario, Canada, Director of the National Particle Technology Research Center of Canada
Jiujun ZHANG	Academician of the Royal Canadian Academy of Sciences, Academician of the Canadian Academy of Engineering, Dean of the Institute of Sustainable Energy of Shanghai University
Jan Cilliers	Fellow of the UK Royal Academy of Engineering, Professor of Imperial College London
Evgeny Levashov	Full Member of the Russian Academy of Natural Science, Professor of National University of Science and Technology "MISIS", Russia
Jerzy Lis	Member of the Polish Academy of Sciences, Rector and Professor of AGH University of Science and Technology, Poland
Ranjith P.G.	Academician of the Australian Academy of Technical Sciences and Engineering, Professor of Monash University
Yingxin ZHOU	Academician of Singapore Academy of Engineering
Chun Fai LEUNG	Academician of Singapore Academy of Engineering, Professor of National University of Singapore
Yujing JIANG	Foreign Academician of the Japanese Academy of Engineering, Professor of Nagasaki University, Japan
Ming LV	Academician of the Norwegian Academy of Technological Sciences
Bernhard Müller	Member of the German National Academy of Science and Engineering, Professor of Technical University of Dresden (TU Dresden), Germany
V.S. Litvinenko	Rector and Professor of Saint Petersburg Mining University, Russia
Yong LIU	Member of the Standing Committee of the Party Committee and Deputy General Manager of China National Coal Group Corporation, Member of the Party Committee of China Coal Energy Co., Ltd.
Jiachen WANG	Vice President of China University of Mining and Technology (Beijing)
Yuemin ZHAO	Former Vice President and Director of Academic Committee of China University of Mining and Technology
Deming WANG	Professor of China University of Mining and Technology
Shihao TU	Professor of China University of Mining and Technology
Xibo YUAN	Professor of China University of Mining and Technology
Branko Matovic	President of the Serbian Society for Ceramic Materials, Professor of University of Belgrade, Serbia
Onuralp Yücel	Professor of Istanbul Technical University, Turkey
Sergey A. Grinshpun	Director of Research Center for Health Related Aerosols Study, University of Cincinnati, USA
Tomasz Czujko	Professor of Military University of Technology, Poland

➤ Chair of Organizing Committee

Zhengfu BIAN	Professor and Vice President of China University of Mining and Technology
Fubao ZHOU	Professor and Vice President of China University of Mining and Technology



➤ Member of Organizing Committee

Feng LIU	Vice President of China National Coal Association, Chairman and Researcher of China Coal Society
Yong XUE	Academician of the International Eurasian Academy of Sciences, Professor of China University of Mining and Technology
Shizhi MA	Chief Engineer of China National Coal Group Corporation
Hua GUO	Dean of the Commonwealth Scientific and Industrial Research Organization, Australia
Kefei ZHANG	Professor of China University of Mining and Technology
Guijian LIU	Professor of University of Science and Technology of China
Fred Cawood	Professor and Director of Wits Mining Institute, University of the Witwatersrand, South Africa
Quansheng LI	Director of Science and Technology Department, China Energy Investment Group, Professor Level Senior Engineer
Tingxiang REN	Professor of University of Wollongong, Australia
Serkan Saydam	Professor of the University of New South Wales, Australia
Xianping TAO	Professor of Nanjing University, China
Zhijie CHEN	Professor of National Taiwan University, China
Wendy Timms	Professor of Monash University, Australia
Derek Elsworth	Member of National Academy of Engineering, Professor of the Pennsylvania State University, USA
Spearing Anthony John Spencer	Professor of China University of Mining and Technology
Jixiong ZHANG	Professor of China University of Mining and Technology
Wenping LI	Professor of China University of Mining and Technology
Jianwei LI	Professor of China University of Geosciences (Wuhan)
Eduardo Córdova Vergara	Professor of Pontifical Catholic University of Chile, Chile
Jerôme Fortin	CNRS Senior researcher at ENS Paris (PSL University) Adjunct Professor at Ecole Polytechnique, France
Zhenqi HU	Professor of China University of Mining and Technology
Qixing ZHOU	Professor of Nankai University
Huang, Guohe	Fellow of the Canadian Academy of Engineering, Professor of University of Regina, Canada
Xinyu WANG	Professor of China University of Mining and Technology
Jiang CHANG	Professor of China University of Mining and Technology
Minjun SHI	Professor of Zhejiang University
Gang LIU	Professor of University of Southern Denmark, Denmark
Huaichun ZHOU	Professor of China University of Mining and Technology



Rui XIAO	Professor of Southeast University
Kunlei LIU	Professor and Associate Director of Center for Applied Energy Research, University of Kentucky, USA
Gongbo ZHOU	Professor of China University of Mining and Technology
Yuanqing XIA	Professor of Beijing Institute of Technology
Dan ZHANG	Fellow of the Canadian Academy of Engineering, Professor of York University, Canada
Enyuan WANG	Professor of Beijing Institute of Technology
Baisheng NIE	Professor of Chongqing University
Steven Schatzel	Chief Scientist of the National Institute for Occupational Safety and Health, USA
Peizhong FENG	Professor of China University of Mining and Technology
Huaming YANG	Professor of Central South University
Farid AKHTAR	Professor of Lulea University of Technology, Sweden
Hermenegildo García	Professor of Polytechnic University of Valencia, Spain
Yibao WANG	Professor of China University of Mining and Technology
Xiaolin XU	Professor of Huazhong University of Science and Technology
Gerald Z Lan	Professor of Arizona State University, USA
Haijun ZHANG	Professor of China University of Mining and Technology
Qingxia LIU	Academician of the Canadian Academy of Engineering, Dean of the School of Innovation and Entrepreneurship of Shenzhen University of Technology
Yuqing FENG	Professor of the Commonwealth Scientific and Industrial Research Organization, Australia
Zhanguo MA	Professor of China University of Mining and Technology
Shengqi YANG	Professor of China University of Mining and Technology
Xiaoping ZHOU	Professor of Wuhan University
Wei WU	Assistant Professor of Nanyang Technological University, Singapore
Liang SUN	Professor of China University of Mining and Technology
Yun ZHANG	Researcher Level Senior Engineer of Jiangsu Provincial Department of Housing and Urban Rural Development
Yupeng WU	Professor of University of Nottingham, UK



➤ Session Chairs

Session Topics		Session Co-Chairs
1	Resource Development and Utilization	Jixiong ZHANG
		Spearing Anthony John Spencer
		Jianwei LI
		Eduardo Córdova Vergara
		Jerôme Fortin
2	Environmental Science and Engineering	Zhenqi HU
		Qixing ZHOU
		Guohe HUANG
3	Energy and Sustainable Green Development	Xinyu WANG
		Jiang CHANG
		Minjun SHI
		Gang LIU
		Bernhard Müller
4	Energy Science and Technology	Huaichun ZHOU
		Rui XIAO
		Kunlei LIU
5	Intelligent Equipment and Technology	Gongbo ZHOU
		Yuanqing XIA
		Dan ZHANG
6	Occupational Safety and Health	Enyuan WANG
		Baisheng NIE
		Steven Schatzel
7	Mineral Materials and Advanced Energy Materials	Peizhong FENG
		Huaming YANG
		Farid AKHTAR
		Hermenegildo García
8	Public Security and Emergency Management	Yibao WANG
		Xiaolin XU
		Gerald Z Lan
9	Clean Processing and Conversion of Energy Resources	Haijun ZHANG
		Qingxia LIU
		Yuqing FENG
10	Resource Development and Utilization of Underground Space	Xiaozhao LI
		Shengqi YANG
		Xiaoping ZHOU
		Ranjith P.G
		Wei WU
11	Green and Low-carbon Technology for Urban and Rural Construction	Liang SUN
		Yun ZHANG
		Yupeng WU



Conference Program

Agenda

Time (GMT+8)	Agenda
Opening Ceremony (May 26, Thursday)	
Venue: CUMT Main Library Live Available: http://eresd.cn/live.html	
8:30-9:00	Moderator: Prof. Zhengfu BIAN <i>Chair of ERESD 2022 Organizing Committee, Vice President of China University of Mining and Technology</i>
Plenary Session (May 26, Thursday)	
Venue: CUMT Main Library Live Available: http://eresd.cn/live.html	
Moderator: Prof. Yong XUE <i>Academician of the International Eurasian Academy of Sciences, Professor of China University of Mining and Technology</i>	
09:00-09:10	Assessment of the Role of the State in the Management of Mineral Resources Prof. Vladimir Litvinenko (Russia) <i>Full Member of the International Academy of Sciences of Higher Education, Academician of the Russian Academy of Natural Sciences, Chairman of the Governing Board of International Competence Center for Mining-Engineering Education under the Auspices of UNESCO, Rector and Professor of Saint Petersburg Mining University</i>
09:10-09:40	Green and Low Carbon Building Materials Prof. Changwen MIAO (China) <i>Academician of the Chinese Academy of Engineering, Chairman of the International Green Building Alliance, Professor of Southeast University</i>
09:40-10:10	Initiatives of AGH UST in the Field of Resources, Energy and Climate Policy of Poland and the EU Prof. Jerzy Lis (Poland) <i>Member of the Polish Academy of Sciences, Rector of AGH University of Science and Technology</i>
Break	
10:30-11:00	Underground Space Use for Sustainable Urban Development - the Singapore Experience Prof. Yingxin ZHOU (Singapore) <i>Fellow of the Academy of Engineering Singapore and Fellow of the International Society for Rock Mechanics and Engineering (ISRM)</i>
11:00-11:20	Lunar Mining Ideas Can Transform Earth Mines Prof. Jan Cilliers (UK) <i>Fellow of the UK Royal Academy of Engineering, Professor of Imperial College London</i>
11:20-12:00	Driving the Electric Revolution--A Pathway to Net Zero Prof. Xibo YUAN (China) <i>Professor of China University of Mining and Technology</i>



Time (GMT+8)	Agenda
Technical Sessions (May 26, Thursday)	
14:00-18:00 <i>See Session Program</i>	<ol style="list-style-type: none"> 1. Resource Development and Utilization 2. Environmental Science and Engineering 3. Energy and Sustainable Green Development 4. Energy Science and Technology 5. Intelligent Equipment and Technology 6. Occupational Safety and Health 7. Mineral Materials and Advanced Energy Materials 8. Public Security and Emergency Management 9. Clean Processing and Conversion of Energy Resources 10. Resource Development and Utilization of Underground Space 11. Green and Low-carbon Technology for Urban and Rural Construction
Technical Sessions (May 27, Friday)	
08:30-12:00 14:00-16:30 <i>See Session Program</i>	<ol style="list-style-type: none"> 1. Resource Development and Utilization 2. Environmental Science and Engineering 3. Energy and Sustainable Green Development 4. Energy Science and Technology 5. Intelligent Equipment and Technology 6. Occupational Safety and Health 7. Mineral Materials and Advanced Energy Materials 8. Public Security and Emergency Management 9. Clean Processing and Conversion of Energy Resources 10. Resource Development and Utilization of Underground Space 11. Green and Low-carbon Technology for Urban and Rural Construction
Closing Ceremony (May 27, Friday)	
Venue: CUMT Main Library Live Available:	
17:00-18:00	Closing Ceremony

Opening Ceremony, Plenary Session and Closing Ceremony:



Live Available



Scan to listen to the opening ceremony simultaneous interpretation



Scan to listen to the closing ceremony simultaneous interpretation



Session Topics 1: Resource Development and Utilization

➤ Time (GMT+8): May 26, Thursday

Time	Title
Moderator: Liqiang MA, Oleg I. Kazanin	
14:00-14:20	Design and Development of the Gold Recovery from E-Waste: A Feasibility Study Mohammad Reza Bilesan , Lappeenranta University of Technology
14:20-14:40	The Green Mining Technology Integrating Mining, Separating, Backfilling +X and Its Practices for Deep Coal Resources Jixiong ZHANG , China University of Mining and Technology
14:40-15:00	Methane Emission Control at the Longwall Panels: Challenges and Prospects for the Coal Mines in Russia Oleg I. Kazanin , St. Petersburg Mining University
15:00-15:20	Paradigm of Ultra-Deep Injection and Storage Approach for Reducing Deep Mine Water Surface Drainage at Coal Mine Areas Xin LI , China University of Mining and Technology
15:20-15:40	Precursor Prediction for Early Violent Failure Based on Infrared Radiation Emissions for Coal Specimens under Different Loading Rates Naseer Muhammad Khan , Balochistan University of Information Technology Engineering and Management Sciences
15:40-16:00	Break
Moderator: Wenping LI, Hakan Basarir	
16:00-16:20	The Use of Soft Computing Methods in Different Mining Engineering Design Works Basarir Hakan , Norges Teknisk-Naturvitenskapelige Universitet
16:20-16:40	Mass Transfer Mechanisms for CO₂ Storage and Enhanced Oil Recovery in Shale Oil Reservoirs Shaojie ZHANG , China University of Mining and Technology
16:40-17:00	Strength and Microstructural Evolution of Fly Ash-Based Paste Backfill Activated by CO₂ and Silicate Additive Ichhuy Ngo , Institute of Technology of Cambodia
17:00-17:20	A Novel Non-Water Fracturing Method to Enhance Gas Flow in Coal Lei ZHANG , State Key Laboratory of Coal Resources and Safe Mining, School of Mines, China University of Mining and Technology
17:20-17:40	Prediction of Floor Failure Depth in North China Coalfield Based on Multiple Regression Model and Information Entropy Chengyao GAO , China University of Mining and Technology

➤ Time (GMT+8): May 27, Friday

Time	Title
Moderator: Zhijun WAN, Cordova	
08:00-08:20	Challenges and Technological Advances with Deep Block and Panel Caving Mining Operations Eduardo Cordova , Pontificia Universidad Católica de Chile
08:20-08:40	An Integrated Model to Analyze Economic Development Planning in Energy Rich Regions in the US and China Hodjat Ghadimi , West Virginia University



08:40-09:00	An Improved Empirical Room and Pillar Design Methodology Anthony John Spencer Spearing , China University of Mining and Technology
09:00-09:20	The Potential of Foamed Backfilling in Underground Mines Liqiang MA , State Key Laboratory of Coal Resources and Safe Mining, School of Mines, China University of Mining and Technology
09:20-09:40	Research on the Initiation Pressure Criterion of Directional Hydraulic Fracturing in Coal Mine Hu HE , China University of Mining and Technology
09:40-10:00	Break
Moderator: Jixiong ZHANG, Anthony John Spencer Spearing	
10:00-10:20	Utilization of Mine Water Resources in Eastern Australia – Managing Water in Open Pit Mines in a Watershed Context Wendy Timms , Deakin University
10:20-10:40	Progressive Damage Mechanism for Coal Pillars under the Coupling of Stress-Water Immersion in Underground Reservoirs Fangtian WANG , State Key Laboratory of Coal Resources and Safe Mining, School of Mines, China University of Mining and Technology
10:40-11:00	Study on the pH of the Brine Based on Prediction Model in the Process of Mine Water Treatment Project Meiheriayi MUTAILIPU , Xinjiang University
11:00-11:20	A Mine Water Hazard in China—Water Inrush Accompanied by Strong Mine Pressure and Sediment Crushing Wei QIAO , China University of Mining and Technology
11:20-11:40	The Evolution Mechanism of Sulfur Atoms during the Coalification Process Qiannan XU , China University of Mining and Technology

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Jian SHEN, Jérôme Fortin	
14:00-14:20	Climate Protection as a Means to Secure Resources after the Russia-Ukraine War Walter Frenz , RWTH Aachen University
14:20-14:40	High-Precision Reconstruction Method for Acoustic Log in Jurassic Strata, Dongsheng Coalfield Haiyang YIN , China University of Mining and Technology
14:40-15:00	Zoning Evaluation of Rockburst Risk Based on Fuzzy Analytic Hierarchy Process in Gaojiapu Coal Mine, China Xianggang CHENG , China University of Mining and Technology
15:00-15:20	Mechanism of Water Inrush in Coal Mines under Stress-Radial Seepage Coupling Effect Dan MA , State Key Laboratory of Coal Resources and Safe Mining, School of Mines, China University of Mining and Technology
15:20-15:40	Effect of Water Discharging on the Mechanical Properties of Sandstone Aquifer Xiaohan YANG , University of Wollongong
15:40-16:00	Exploitation of 3D Printing Technology to Mimic Coal Mine Roadway Deformation Valter Carvelli , Politecnico di Milano



Session Topics 2: Environmental Science and Engineering

➤ Time (GMT+8): May 26, Thursday

Time	Title
13:50-14:00	Opening Speech Nanshan ZHENG/Zhenqi HU , School of Environment Science and Spatial Informatics, China University of Mining and Technology
Moderator: Zhenqi HU, Qixing ZHOU	
14:00-14:30	Monitoring the Efficiency of Reclamation of Depleted Coal Deposits Maria A. Pashkevich , Saint Petersburg Mining University
14:30-15:00	Petroleum-Contaminated Soil Remediation and Carbon Neutralization Qixing ZHOU , Nankai University
15:00-15:20	The Effectiveness of Typha Angustifolia as Phytoremediation Agent for Heavy Metals (Fe, Mn) Reduction in the Coal Mining Operation Heru Suharyadi , UPN Veteran Yogyakarta
15:20-15:35	Toxicity of Heavy Metals and Detoxification of Sulfate in Crops in Mining Areas Xin XIAO , China University of Mining and Technology
15:35-15:50	A New Approach to Increase Land Reclamation Rate in Coal Mining Subsidence Area: A Case Study of Guqiao Coal Mine, China Gensheng LI , China University of Mining and Technology
15:50-16:00	Break
Moderator: Lizhang WANG, Mindong BAI	
16:00-16:30	Studies on the Red Tide Algae of Rapid Inactivation Using Hydroxyl Radicals and Carbon Sequestration into the Seabed Mindong BAI , Xiamen University
16:30-17:00	Isotope Effects as Analytical Probes to Decipher Dehalogenation Mechanisms Agnieszka Dybala-Defratyka , Lodz University of Technology
17:00-17:20	Laboratory Simulation in Developing the Swampy Forest System for Passive Treatment of Acid Mine Drainage Ihsan Noor , University of Lambung Mangkurat, Indonesia
17:20-17:40	Advanced CFD and Measurement Technology for the Study of Multiphase Flow in a Media with Complex Structures Wei DING/Markus Schubert , Helmholtz Center, Germany
17:40-17:50	Investigation on the Bubbling Behavior in the Flat Sheet Membrane Reactor (FSMBR) Haiqiang YANG , East China University of Science and Technology
17:50-18:00	Gold Extraction and Recovery from Aqueous Solution Using Electrocoagulation Coupled Nanofiltration Process Guofu DAI , China University of Mining and Technology
18:00-18:10	Exploration of Coal Slurry Sedimentation Characteristics from the Perspective of Clay Behavior Bingfeng LIU , China University of Mining and Technology



18:10-18:20	Preparation of a Novel Z-Scheme Photocatalyst for Round-the-Clock Organic Pollutants Degradation with Simultaneous Hydrogen Production Jianhe TANG , Liaoning University
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➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Shaoliang ZHANG, Guohe HUANG	
08:30-08:50	Mapping the Cumulative Impacts of Long-Term Mining Disturbance and Progressive Rehabilitation on Ecosystem Services Zhenyu WANG , Peking University Shenzhen Graduate School
08:50-09:05	Effect of Non-Ammonium Leaching Agent of Ion-Adsorption Rare Earth Ore on Soil Properties Yong HE , Nanchang University
09:05-09:20	Evaluation of Soil Quality and Maize Growth in Different Profiles of Coal Gangue Filling Reclaimed Land Shuguang LIU , China University of Mining and Technology
09:20-09:40	Research on Soil Nutrient Prediction Method Based on UAV Hyperspectral Image in Mining Area Zhanjun XU , Shanxi Agricultural University
09:40-09:55	Evaluation of Intensive Utilization of Land Use in Rural Settlements from the Perspective of Double Carbon: A Case Study of Yishui County, Shandong Province Shuangrong CAI , China University of Mining and Technology
09:55-10:10	Extraction of Ecological Restoration Zones in the Yellow River Basin and its Impact on the Temporal and Spatial Dynamics of Ecosystems Yuhang ZHANG , China University of Mining and Technology
10:10-10:20	Break
Moderator: Jiang CHANG, Wu XIAO	
10:20-10:50	How to Improve the Continuity and Sustainable Utilization of Farmland in China- A Perspective from Sustainability, Efficiency, and Trade-Offs Wu XIAO , Zhejiang University
10:50-11:05	Case Study: Sustainable Rammed Earth Model House Celina LIANG , West Virginia University
11:05-11:20	Study on the Contribution of Ecological Resources to Ecotourism Economy and Sustainable Development Rong LI , Nanjing University
11:20-11:35	Application of High Density Organic Material in Soils Provides a Potential Measure for Organic Byproducts Recycling and Soil Fertility Elevating Yulin ZHANG , Northwest A & F University
11:35-11:45	Effect of Contact Angle Hysteresis on Measurement Methods of Unsaturated Soil Matrix Suction Chuan ZHANG , China University of Mining and Technology, Yunnan Agricultural University



11:45-11:55	Technique of Concurrent Mining and Reclamation in Multiple-Seams Repeated Mining with High Underground Water Table Zhanjie FENG , China University of Mining and Technology
11:55-12:05	A Predicting Method for Mining and Reclamation Impact on Carbon Storage: A Case Study of Yanzhou Coalfield Jiazheng HAN , China University of Mining and Technology
12:05-12:15	Estimation of PM_{2.5} and PM₁₀ Mass Concentrations in Mining City Cluster from Gaofen-1 Aerosol Optical Depth Data and the WRF-Chem Model Yuxin SUN , China University of Mining and Technology

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Yong XUE, Costas A. VAROTSOS	
14:00-14:30	The Capabilities of Geoinformation Monitoring System-Technology for Ecological Monitoring of the Environment Costas A. VAROTSOS , National and Kapodistrian University of Athen
14:30-15:00	Towards Future Smart Cities Wenzhong SHI , The Hong Kong Polytechnic University
15:00-15:25	Urban Space and Function Optimal Allocation for Reducing Carbon Emission Based on Crowd-Sourced Spatio-Temporal Big Data Qianxin WANG , China University of Mining and Technology
15:25-15:30	Break
Moderator: Lianbi ZHOU, Yanzhu ZHANG	
15:30-16:00	Environmental Risk and Prevention and Control of Non-Ferrous Mental Tailings Pond Lianbi ZHOU , Beijing General Research Institute of Mining & Metallurgy
16:00-16:20	Global Climate Policy: Mitigation and Adaptation Jingjing GAO , UNEP Copenhagen Climate Centre
16:20-16:40	Synergies of Mining and Resource Cooperation along the Belt and Road under the Carbon Neutrality Landscape Yanzhu ZHANG , Foreign Environmental Cooperation Center, Ministry of Ecology and Environment of China/German Development Institute

Session Topics 3: Energy and Sustainable Green Development

➤ **Time (GMT+8): May 26, Thursday**

Time	Title
Moderator: Xinyu WANG, Jiang CHANG	
14:00-14:10	Opening Ceremony
14:10-14:40	Towards Low-Carbon Cities Experiences from Germany Bernhard Mueller , TU Dresden
14:40-15:10	Energy Transition, Carbon Peaking and Carbon Neutrality Minjun SHI , Zhejiang University



15:10-15:40	Analysis on the Evolution and Effects of Sustainable Development Policy of Resource-Based Cities in China Wenzhong ZHANG , Institute of Geographical Science and Natural Resources Research, CAS
15:40-16:10	Sociometabolic Analytics for Circular Economy and Carbon Neutrality Gang LIU , University of Southern Denmark
16:10-16:40	Sustainable Rural Design Zurui LIN , China University of Mining and Technology
16:40-17:10	Has the Stress on China's Carbon Market been Released? A Consideration of National and Pilot Carbon Market Stress Index Construction Lingyun HE , China University of Mining and Technology

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Cheng LI	
08:00-08:30	The Host Organizes the Meeting
08:30-08:50	The Spatial Patterns and Formation Factors of Brownfields in China: A Meta-Analysis Yang Song , Northeast Normal University
08:50-09:20	Identification of Spatial Conservation and Restoration Priorities for Ecological Networks Planning in a Highly Urbanized Region: A Case Study in Beijing-Tianjin-Hebei, China Wei HOU , Chinese Academy of Surveying & Mapping
09:20-09:40	Evolution and Optimization Strategy of Spatial Relationship between Independent Mining Areas and Urban Areas: A Case Study of Three Old Mines in Jincheng, China Cankun LI , China University of Mining and Technology
09:40-10:00	Research on Consumption-Side Carbon Transfer and Carbon Unequal Exchange - Under the Perspective of Domestic Chain Fragmentation Xiaoyun ZHANG , China University of Mining and Technology
10:00-10:10	Break
10:10-10:30	Information Infrastructure and Greenhouse Gas Emission Performance in Urban China: A Time-Varying Difference-in-Differences Analysis Yangfan LI , China University of Mining and Technology
10:30-10:50	Spatial Effects and Influencing Factors of Urban Carbon Emissions in the Yangtze River Economic Belt Xinyue PANG , Nanjing University of Posts and Telecommunications
10:50-11:10	Delimitation of Urban Growth Boundary and Carbon Emission Effect in Jiangsu Province Based on FLUS Model Haitao JI , China University of Mining and Technology
11:10-11:30	Study on the Spatial Evolution and Optimal Strategies of Coal-Mining Subsidized Wetlands in Xuzhou Ming LI , China University of Mining and Technology
11:30-11:50	Visualizing and Quantifying the Dynamics in the Effect of Carbon Information Disclosure on Enterprise Value Yi HUANG , China University of Mining and Technology



➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Sha LI	
08:00-08:30	The Host Organizes the Meeting
08:30-09:00	Review of Research on Recreational Utilization of Abandoned Mining Areas and Construction of Research Framework System Qiuju WANG , Beijing Union University
09:00-09:20	Research Progress and Prospect of Mining Heritage Based on Citespace Xiangguan GAO , Taiyuan University of Science and Technology
09:20-09:40	Research on the Countermeasures to Revitalize the Modern Industrial Heritage of YangQuan City under the Background of Cultural and Tourism Integration Bo JIANG , China University of Mining and Technology
09:40-10:00	Urban Eco-Spaces under the Influence of Smart Technologies -- Insights and Perspectives Yue NIU , Nanjing University
10:00-10:10	Break
10:10-10:30	Shrinkage Characteristics and Planning Strategy of Sanhui Town in Chongqing from the Perspective of Smart Shrinkage Yedong CHEN , China University of Mining and Technology
10:30-10:50	Study on the Evaluation System of the Quality of Slow Walking Spaces on University Campuses Junjie MA , Beijing Forestry University
10:50-11:10	Mitigation and Adaptation Approach in Neighbourhoods Scale to Cope with Health Risks under Extreme Heat Stress: Experience and Implications of 'Cool Neighbourhoods NYC' Yanxin GUO , Shandong Jianzhu University
11:10-11:30	Thermal Characteristics of Integrated Solar Concentrating Window Lvpei CAI , China University of Mining and Technology
11:30-11:50	Research on Dynamic Concentrating Skin Design Based on Multi-Objective Optimization Bo WANG , China University of Mining and Technology
11:50-12:10	Community Environment Sustainable Development Assessment Based on Emergy Analysis Kaixi ZHAO , Beijing Forestry University

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Xu WANG	
08:00-08:30	The Host Organizes the Meeting
08:30-08:50	Pathways to Economic Development in Distressed Coal Communities in Appalachia Richard Bajura , West Virginia University
08:50-09:10	Economic Uncertainty, Industrial Policies and Technical Innovation of Renewable Energy Enterprises: Evidences from the Listed Photovoltaic Companies in China Bangjun WANG , China University of Mining and Technology



09:10-09:30	Free Trade Zone and China's Industrial Green Transformation: Theoretical Mechanism and Empirical Test Xiaolei WANG , China University of Mining and Technology
09:30-09:50	Carbon Emissions Trading, Regional Heterogeneity, and Green Technical Innovation: Evidence from a Quasi-Natural Experiment in China Wang XU , China University of Mining and Technology
09:50-10:10	How does Emission Trading Reduce China's Carbon Work? An Exploration Using LMDI and Time-Varying DID Approach Qing JIA , China University of Mining and Technology
10:10-10:20	Break
10:20-10:40	Policy Adjustment, Market Pressure and Sustainable Development of New Energy Vehicle Parts Enterprises: The Moderating Role of Buyer's Market Power Bowen MA , China University of Mining and Technology
10:40-11:00	What Really Influences the Development of Renewable Energy? A Systematic Review and Meta-Analysis Yadong WANG , China University of Mining and Technology
11:00-11:20	A Preliminary Study on the Innovative Model of Precision Management of Waste in Non-Waste Community Yunuo CHENG , China University of Mining and Technology
11:20-11:40	Central Government and Local Governments Policy Synergy Dilemma and Influencing Factors in the Process of Coal De-Capacity: A Two-Stage Evolutionary Game Model Dandan LIU , China University of Mining and Technology
11:40-12:00	The Transmission Mechanism of the Manufacturing Industry Production Activities to Carbon Emissions from the Input-Output Subsystem Perspective: A Case of China Jixin WEN , China University of Mining and Technology

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Tao LV	
08:00-08:30	The Host Organizes the Meeting
08:30-08:50	Allocation of Non-Hydro Renewable Portfolio Standard Targets among China's Provinces Based on Bi-Level Programming Approach Chunxiao LI , China University of Mining and Technology
08:50-09:10	Forecasting Coal Power Overcapacity Risk in China: A Novel Hybrid Data-Driven Approach Jinqi MAO , China University of Mining and Technology
09:10-09:30	Are the Official National Energy Data Credible? Empirical Evidence from Statistics Quality Evaluation of China's Coal and its Downstream Industries Fan CHEN , China University of Mining and Technology
09:30-09:50	Forecasting Power Demand in China with a CNN-LSTM Model Including Multimodal Information Jun GAN , China University of Mining and Technology
09:50-10:10	A Feasible Pathway of the Coal Industry to Achieve Carbon Neutrality through Integrated Life Cycle Innovation in China Siyao WANG , China University of Mining and Technology



10:10-10:20	Break
10:20-10:40	Spatiotemporal Characteristics and Influencing Factors of Renewable Energy Production in China: A Spatial Econometric Analysis Tao LV , China University of Mining and Technology
10:40-11:00	Prediction Research of VaR and ES in Crude Oil Market Based on Mixed Data Sampling and Asymmetric Laplace Distribution Song SHI , China University of Mining and Technology
11:00-11:20	Impact of Green Financing on the Business Performance of China's Environmental Protection Listed Companies Fengyi LEI , China University of Mining and Technology
11:20-11:40	What are the Differences between the Influences of Issuing Green Bonds on the Short-Term and Long-Term Corporate Financial Performance? Evidence from China Fengyun LIU , China University of Mining and Technology
11:40-12:00	Green Finance, Research and Development Investment and High-Quality Economic Development Jing GAO , Nanjing Normal University

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Jutta Nuortila-Jokinen	
13:30-14:00	The Host Organizes the Meeting
14:00-14:30	Debating Low Carbon Economy within the Prosumers Communities Pawel Mirowski , AGH University of Science and Technology
14:30-15:00	Utilisation of Industrial Side Streams as Raw Materials for 3D Printed Infra Structures Jutta Nuortila-Jokinen , LUT University
15:00-15:30	Challenges of Post-Mining and the Knowledge Transfer for the Chinese Hard Coal Mining Industry Julia Tiganj , Technische Hochschule Georg Agricola University
15:30-16:00	Residential Heating Using Woody Biomass in Germany – Supply, Demand, and Spatial Implications Ralf-Uwe Syrbe , Leibniz Institute of Ecological Urban and Regional Development

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Bangjun WANG	
13:30-14:00	The Host Organizes the Meeting
14:00-14:20	Electrical Energy Production in EU and CO₂ Reduction – Needs and Possibilities Krzysztof Kogut , AGH University of Science and Technology
14:20-14:40	Does Carbon Emission Trading Mechanism Affect Employment? Evidence from China Ziyu WEN , China University of Mining and Technology
14:40-15:00	Ethical Dilemma of Pro-Environmental Behavior – A Mental Fence Blocking People's Environmental Protection Xinmiao LIU , China University of Mining and Technology



15:00-15:20	Is Corporate Environmental Behavior Beneficial to Corporate Internal Value? Corporate Environmental Behavior, Organizational Citizenship Behavior and the Mediating Role of Work Meaning Fang YANG, China University of Mining and Technology
15:20-15:40	Does Self-Interested Leadership Enhance Employee Green Behavior? The Effect of Environmental Responsibility, Self-Interest Motivation, and Organizational Ethical Climate Qingqing CHEN, China University of Mining and Technology
15:40-16:00	Does Top Management Team Responsible Leadership Help Employees Go Green? The Role of Green Human Resource Management and Environmental Felt-Responsibility Weiting XU, China University of Mining and Technology

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Xiaolei WANG	
13:30-14:00	The Host Organizes the Meeting
14:00-14:20	Normal Distribution Probability Based Thresholding for Segmenting Remote Sensing Index Images: A Case Study of the Xiaolongtan Mining Area, China Heng NI, China University of Mining and Technology
14:20-14:40	Spatiotemporal Variation of Urban Thermal Environment and Its Reasons from 2000 to 2020: A Case Study of the Central Urban Area in Huai'an City, China Yuexiang WANG, China University of Mining and Technology
14:40-15:00	A Study on the Mechanisms of Moral Norm-Value Fit on Employees' Pro-Environmental Behavior: The Mediating Role of Anticipated Emotion Huanmei PI, China University of Mining and Technology
15:00-15:20	Logistic Curve Hypothesis and Verification of Economic Development and Cumulative Carbon Emissions Jiangquan CHEN, China University of Mining and Technology
15:20-15:40	The Green Finance Policy Coupling Effect on Low Carbon Economy: Taking China as an Example Yuling PAN, China University of Mining and Technology
15:40-16:00	Optimal Reduction and Equilibrium Carbon-Allowance Price for the Thermal Power Industry under China's Carbon-Peak Target: Analysis Based on Fractional Brownian Motion and Optimal Control Jiaojiao SUN, China University of Mining and Technology
16:00-16:20	"Sensitive" or "Insensitive"? -- Evaluation of Green Development Performance of Industrial Enterprises Based on Index Prediction Yameng SUN, China University of Mining and Technology



Session Topics 4: Energy Science and Technology

➤ Time (GMT+8): May 26, Thursday

Time	Title
Moderator: Huaichun ZHOU, Xiao YANG	
14:00-14:20	Interfacial Modulation for Enhanced Performance of Chemical Looping Ammonia Synthesis Feng GONG, Southeast University
14:20-14:40	Methane Capture to Ensure Safety of Mining Works and Electricity Production – A Case Study Marek Borowski, AGH University of Science and Technology
14:40-15:00	Interpretation of Soot Formation and Chemiluminescence in Counterflow Diffusion Flames Based on C, O Ratio Space with Application to Oxy-Combustion Zhicong LI, Huazhong University of Science and Technology
15:00-15:20	Migration of Coal-Chlorine in Chemical Looping Combustion Haodong HUANG, Huazhong University of Science and Technology
15:20-15:40	Simulation of Fuel Granulation Behaviours and Analysis of Fuel Distribution Characteristics in Iron Ore Sintering Fanglei DAI, Central South University
15:40-16:00	Waste Utilization of Sewage Sludge and Red Mud Based on Chemical Looping Catalytic Oxidation Chen SONG, China University of Mining and Technology
16:00-16:20	Break
Moderator: Hao CHEN, Wenju YAN	
16:20-16:40	Bipolar Power Converter and Control of Switched Reluctance Generator System for Renewable Energy Storage Wenju YAN, Alternative Energy Vehicle Research Institute, China university of mining and technology
16:40-17:00	A Novel 3-Phase Tubular Permanent Magnet Linear Generator for Wave Power Generation Yongqiang LIU, China University of Mining and Technology, Macau University of Science and Technology
17:00-17:20	A Transverse Flux Single-Phase Tubular Switched Reluctance Linear Generator with Two Stator Poles Jinfu LIU, University of Zilina
17:20-17:40	Enhancing Aerodynamic Performance of Vertical Axis Wind Turbine Using Leading-Edge Micro-Cylinder Junwei ZHONG, Jiangxi University of Science and Technology
17:40-18:00	Synergistic Effect on Chlorine and Inorganics Removal during Co-Hydrothermal Carbonization of Polyvinyl Chloride and Lignocellulosic Biomass Jing ZHANG, China University of Mining and Technology
18:00-18:20	Influence of the Coupling State of Fuel-Support Gas-Pyrolysis Gas on Coal Bed Combustion Rate and Emissions Xiaochuan LI, China University of Mining and Technology



➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Fang LIU, Xin GAO	
08:00-08:20	A Process for Metal Enrichment from End-of-Life Lithium Ion Batteries Xin GAO, University of Kentucky
08:20-08:40	Resin-Enhanced Rocking-Chair Capacitive Deionization Emmanuel Ohiomoba, University of Kentucky
08:40-09:00	The Attrition Study of Copper-Supplemented Iron-Based Oxygen Carrier for Chemical Looping Combustion Neng HUANG, University of Kentucky
09:00-09:20	Syngas Evolution and Energy Recovery from the Polypropylene and Polystyrene Blends via CO₂-Assisted Gasification Xinhao YE, Anhui University of Science and Technology
09:20-09:40	Synergistic Effect to Enhance Ammonia Decomposition over the Co₅Ni₅, Al₂O₃ Catalyst Yu QIU, Southeast University
09:40-10:00	Protrusions Induction by Carbon Black on Surface of Activated Carbon to Enhance its Catalytic Activity Chunmei XIN, China University of Mining and Technology
10:00-10:20	Break
Moderator: Chunyu ZHU, Peitao ZHAO	
10:20-10:40	Preparation of Al@Al₂O₃ Macrocapsules for High Temperature Thermal Storage Yunqi GUO, China University of Mining and Technology
10:40-11:00	Facile Synthesis of Porous AlN@C Supporting Material for Stabilizing Phase Change Material Bo ZHAO, China University of Mining and Technology
11:00-11:20	Anisotropically Enhanced Heat Transfer Properties of Phase Change Material Reinforced by SiC-Coated Biomass Carbon Fibers Scaffold Chengzhi ZHAO, China University of Mining and Technology
11:20-11:40	Supercritical MeOH Liquefaction of Plastic Waste into Transport Fuel Binbin FU, China University of Mining and Technology
11:40-12:00	A-Site Disubstituted of La_{1-x}Sr_xNi_{0.8}Fe_{0.2}O₃ Perovskite on Catalytic Activity and Reaction Mechanism of Coal Tar Cracking Didi GAI, China University of Mining and Technology

Session Topics 5: Intelligent Equipment and Technology

➤ **Time (GMT+8): May 26, Thursday**

Time	Title
Moderator: Gongbo ZHOU	
14:00-14:20	Research Status of the Coal Mine Robot and its Development Wenliang PEI, Citic HIC Kaicheng Intelligence



14:20-14:40	Life Cycle Management of Electromechanical Equipment Based on Digital Technologies Yuriy Zhukovskiy , Saint Petersburg Mining University
14:40-15:00	Automatic Design of Blasting Passport in AutoCAD for Gate Road in Underground Mining Nguyen Ngoc Minh , Central South University, Quang Ninh University of Industry
Moderator: Jianhua YANG	
15:00-15:20	How Can We Achieve the Interoperability in Mining Systems? Saydam Serkan , The University of New South Wales
15:20-15:40	Mine Wireless Networks Technology and Applications Qiang NIU , China University of Mining and Technology
15:40-16:00	Belt Conveyor Speed Regulation and Efficiency Improvement Based on Image Processing Fuqi WANG , China University of Mining and Technology
Moderator: Qiang NIU	
16:00-16:20	Ultra-Wide Band for Underground Mine Positioning and Collision Avoidance Binghao LI , The University of New South Wales
16:20-16:40	Visible Light Communication and Its Applications in Energy Industry Yanbing YANG , Sichuan University
16:40-17:00	Review of Energy Efficient Truck Haulage Options using Battery-Trolley Systems Haiming BAO , The University of Queensland
17:00-17:20	Effect of Thickness on Mechanical Properties and Wear Resistance of CrN, Graphit-iC Coatings Ruirui DAI , China University of Mining and Technology

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Wei TANG	
08:30-08:50	Innovation Design and Applications of Robotic Manipulators in Intelligent Manufacturing System Dan ZHANG , York University
Moderator: Dan ZHANG	
08:50-09:10	Intelligentization of Mineral Flotation Process Based on Distributed Machine Vision Yongfang XIE , Central South University
09:10-09:30	Data-Driven Modeling and Control for Mineral Preparation Processes Wei DAI , China University of Mining and Technology
Moderator: Wei TANG	
09:30-09:50	Intelligent Fault Diagnosis and Anomaly Detection with Deep Learning See-Kiong NG , National University of Singapore
09:50-10:10	Intelligent Driving and Unmanned Vehicle Technology of Mine Transportation Equipments Jiusheng BAO , China University of Mining and Technology



10:10-10:30	Intelligent Visible Light Positioning and Navigation for Indoor and Underground Scenarios Yuan ZHUANG , Wuhan University
Moderator: Wei DAI	
10:30-10:50	Research on Vibration Isolation System of Airborne Deep-Earth Electromagnetic Detection Equipment Junfeng YUAN , China University of Mining and Technology
10:50-11:10	Fusion Positioning Method of Anti-Impact Drilling Robot Based on Multiple Inertial Units and Visual Image Lei SI , China University of Mining and Technology
11:10-11:30	TBD El Saddik , University of Ottawa

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Yuanqing XIA	
14:00-14:20	Development of Nondestructive Testing Techniques for Fusion Reactors Noritaka Yusa , Tohoku University
14:20-14:40	Automated Extraction and Evaluation of Fracture Trace Maps from Rock Tunnel Face Images via Computer Vision Techniques Jiayao CHEN , Tongji University
Moderator: Jianhua YANG	
14:40-15:00	Design of Underground Multi-Axis Hydraulic Manipulator Control System Based on Embedded Linux Yu XIAO , China Coal Electric Co., Ltd
15:00-15:20	Optical Techniques in Measuring Surface Topography in Mining Industrial Manufacturing Grzegorz Królczyk , Opole University of Technology

Session Topics 6: Occupational Safety and Health

➤ **Time (GMT+8): May 26, Thursday**

Time	Title
Moderator: Ting REN	
13:30-13:45	The Rule and Reaction Mechanisms of Coal Dust Explosion Baisheng NIE , Chongqing University
13:45-14:00	Regulation and Control of Ventilation in Underground Workings with the Use of VentSim Software Marek Borowski , AGH University of Science and Technology
14:00-14:15	Research and Application of Key Technologies for Efficient Control of Coal Fires Xiaoxing ZHONG , China University of Mining and Technology
14:15-14:27	Qualitative and Quantitative Investigation into the Impact of Seam Orientations on Spontaneous Combustion Management and Control Ming QIAO , University of Wollongong



14:27-14:39	Experimental Study on Diffusion Radius of Inorganic Fire Extinguishing Materials in Loose Body Dezhi RAN , China University of Mining and Technology
14:39-14:51	Experimental and Numerical Study of Polyurea Coated Shelter in Petrochemical Enterprises Meng GU , China University of Petroleum (East China)
14:51-15:03	Influence of Loose Rock Mass on Gas Explosion Propagation Characteristics in Goaf Yansen LU , China University of Mining and Technology
15:03-15:20	Break
Moderator: Baisheng NIE	
15:20-15:35	Lab Studies of Multi-Scale Pore Fractal Characteristics of Different Rank Coals Ting REN , University of Wollongong
15:35-15:50	Big Data Analysis and Monitoring and Early Warning Cloud Platform for Gas Disaster Risk Enyuan WANG , China University of Mining and Technology
15:50-16:05	Effects of Heat Recirculation on the Combustion Stability of Coal Mine Low Concentration Methane in Porous Media Qingzhao LI , China University of Mining and Technology
16:05-16:17	Forecasting Methane Content along the Depth of Mao Khe Coal Mine Using Experimental Data Analysis Thang Pham Duc , Quang Ninh University of Industry
16:17-16:29	Insights from EMR(Electrogenic Radiation) for Laboratory Rock Mechanic Tests and its Field Applications Haishan JIA , China University of Mining and Technology
16:29-16:41	Impact of Moisture Content on Energy Evaluation and Acoustic Emission Characteristics of Coal under Load Muhammad Ali , China University of Mining and Technology
16:41-16:53	Experimental Study on Evolution Characteristics of Coal Seam Parameters under True Triaxial Cyclic Mining Jiabo GENG , Jiangxi Province Key Laboratory of Mining Engineering

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Steven Schatzel	
08:30-08:45	An Aerosol Perspective on COVID-19 Chih-Chieh CHEN , National Taiwan University
08:45-09:00	Calibration of Low-Cost PM Sensors for Coal Dust Monitoring Guang XU , Missouri University of Science and Technology
09:00-09:15	Study on New Dust Collector Based on Coanda Effect Jingtai SHI , China University of Mining and Technology
09:15-09:27	Effects of Pleat Geometry on the Filtration and Loading Performance of Filter Media Shihang LI , China University of Mining and Technology
09:27-09:39	Surface Pore Characteristics of Original Coal Dust Produced in Underground Mining Sites and Their Impact on the Moisture Content Jianguo LIU , University of Science and Technology Beijing



09:39-09:51	Influence of Disinfection on the Reuse of Disposable Masks and N95 Respirators Jintuo ZHU , China University of Mining and Technology
09:51-10:03	Air Curtain Technology and Equipment for Workplace Dust Control of Unable Enclosed Spaces Xiaochuan LI , China University of Mining and Technology
10:03-10:15	Morphological and Aerodynamic Characteristics of Respirable Dust Aggregates Zhengbiao PENG , The University of Newcastle
10:15-10:27	Perovskite CsPbBr₃ Quantum Dots-Embedded ZnO Nanocrystals Based Gas Sensors for Detection of a Lung Disease Biomarker: Heptanal Wufan XUAN , China University of Mining and Technology
10:27-10:40	Break
Moderator: Xinjian HE	
10:40-10:55	Experimental Evaluation of Respirator Performance against Nanoparticles Xinjian HE , China University of Mining and Technology
10:55-11:07	Combination between Kinematic Analysis and Distinct Element Modelling in Pit Slope Stability for Dimension Stone Quarries: Case Study at Dimension Stone Quarry Nui Trai, Binh Dinh Province, Vietnam Viet Pham Van , Hanoi University of Mining and Geology
11:07-11:19	Warning Model of Coal Mine Ventilation Disaster Based on the Combination of K-Neighborhood-Gray Correlation Method and its Application Huanhuan ZHANG , China Coal Information Technology (Beijing) Co., Ltd
11:19-11:31	Identification and Assessment of Occupational Risk Factors in Construction Process Xixi LUO , China University of Mining and Technology
11:31-11:43	Research on the Disaster Characteristics of Pool Fire with Circular Obstruction Jian CHEN , China University of Petroleum (East China)

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Xinjian HE	
14:00-14:20	Occupational Safety and Health in Mining: Through the Lens of Sustainable Development Marat L. Rudakov , Saint Petersburg Mining University
14:20-14:40	Extraction and Utilization of Heat and Humidity in Mine Ventilation Rongting HUANG , China University of Mining and Technology
14:40-14:55	Effective Visual Guidance and Optimization of the Interface Paradigm for MI-BCI Yuxin BAI , China University of Mining and Technology
14:55-15:07	Effects of Underground Street Planting on Spatial Visual Health Based on Eye Movement Analysis: A Case Study of Nanjing city Cheng CHANG , China University of Mining and Technology
15:07-15:20	Break



Moderator: Lina ZHENG	
15:20-15:40	Analysis of Crystalline Silica Aerosol Using Portable Raman Spectrometry: Feasibility of Near Real-Time Measurement Lina ZHENG, China University of Mining and Technology
15:40-15:55	Effect of Natural Light Introduction on Visual Health Comfort of Underground Pedestrian Street Based on Eye Movement Analysis Yue LIANG, China University of Mining and Technology
15:55-16:10	Research on the Recognition Method of Medical Equipment Experience Based on Cognitive Psychology Jiawei REN, China University of Mining and Technology
16:10-16:22	Statistical Analysis of Shape of Concha for Mass Customization of Ear-Related Products Kexuan ZHOU, China University of Mining and Technology

Session Topics 7: Mineral Materials and Advanced Energy Materials

➤ Time (GMT+8): May 26, Thursday

Time	Title
Moderator: Peizhong FENG	
14:00-14:40	Nanoclay-Based Biomedical Materials: Functional Design and Application Huaming YANG, Central South University
14:40-15:10	Control over Wettability as a Route towards Improved Solid State Sodium Metal Batteries Wojciech Zajac, AGH University of Science and Technology
15:10-15:30	Layered Double Hydroxide: A New Cathode Material for High-Performance Chloride Ion Batteries Qing YIN, China University of Mining and Technology
15:30-15:35	Break
Moderator: Huaming YANG	
15:35-16:05	Methoxy-Grafted NiFe-LDH with Enhanced Adsorption Removal of Methyl Orange from Aqueous Solution Jinan NIU, China University of Mining and Technology
16:05-16:35	High-Performance BNT-Based Ferroelectric Ceramics with Simultaneously Enhanced Polarization and Breakdown Strength Ziming CAI, China University of Mining and Technology
16:35-16:55	Design of Scalable Dendritic Copper as High Specific Surface Area Support for Efficient Energy Storage Yidong MIAO, China University of Mining and Technology
16:55-17:00	Break
Moderator: Ziming CAI	
17:00-17:20	Preparation and Anticancer Effects of Kaolinite, Carbon Nitride Quantum Dots Complex Juan LIAO, Central South University



17:20-17:40	High-Temperature Oxidation Behavior of MoSi₂ Based Coatings for Protecting Refractory Metals by Spent MoSi₂ Heating Elements Lu ZHU , Politecnico di Milano
17:40-18:00	Potassium Prussian Blue Cathode for Potassium-Ion Full-Cells Yechao LIN , China University of Mining and Technology
18:00-18:20	Granules of Zeolite - Strontium Chloride Composite for a Reliable Ammonia-based Selective Catalytic Reduction Zhejian CAO , Luleå University of Technology

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Ming ZHENG	
08:30-09:00	High Energy Density Nanocomposite Materials Based on Ultrafine Ferroelectric Nanoparticles Yanan HAO , Beijing University of Posts and Telecommunications
09:00-09:25	Exploring the Mechanism on Cyclic Stability in Carbon Anode Materials for Ion Batteries Yaxin CHEN , China University of Mining and Technology
09:25-09:45	Multiphase Engineered Bi_{1-x}Na_x2TiO₃-Based Ceramics with Simultaneous High Polarization and Superior Breakdown Strength for Energy Storage Applications Chaoqiong ZHU , Tsinghua University
09:45-09:50	Break
Moderator: Yaxin CHEN	
09:50-10:15	Ruddlesden-Popper-Structured (Pr_{0.9}La_{0.1})₂(Ni_{0.8}Cu_{0.2})O_{4+δ}: An Effective Oxygen Electrode Material for Proton-Conducting Solid Oxide Electrolysis Cells Yunfeng TIAN , China University of Mining and Technology
10:15-10:35	Na₃V_{2-x}Fe_x(PO₄)₂O₂F: An Advanced Cathode Material with Ultra-High Stability for Superior Sodium Storage Xiangfei HE , Taiyuan University of Technology
10:35-10:55	Design of Cathode Materials and Electrode, Electrolyte Interface to Enhance the Potassium Storage Performance Jiacen LIU , China University of Mining and Technology
10:55-11:00	Break
Moderator: Yunfeng TIAN	
11:00-11:20	Micro-Spherical BiOI Photocatalysts for Environmental Remediations: Efficient Degradation of Residual Xanthate and Gaseous Nitric Oxide Liuhu JIA , China University of Mining and Technology
11:20-11:40	Co-Doped Conductive Polyaniline Hydrogel for Flexible Supercapacitor and Wearable Strain Sensor Liyang DOU , China University of Mining and Technology
11:40-12:00	Efficient Conversion of Low Concentration Coal-Bed Methane into Power via Solid Oxide Fuel Cells Integrated the Activated Catalyst-Modified Microchannels Yang YANG , China University of Mining and Technology



➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Jinan NIU, Yihan LING, Farid Akhtar	
14:00-14:40	Photocatalysis. How Close (or far) are We from Getting Solar Fuels? Hermenegildo Garcia , Universidad Politécnica de Valencia
14:40-15:00	Tunable Covalent Triazine-Based Frameworks (CTF-o) for Visible-Light-Driven Hydrogen and Oxygen Generation from Water Splitting Dan KONG , China University of Mining and Technology
15:00-15:20	Microstructure and Properties of Porous Mineral Materials Prepared via Combustion Synthesis Technique Zhichao SHANG , China University of Mining and Technology
15:20-15:45	Nanostructured Molybdenum Dichalcogenides Based Electrocatalysts for Hydrogen Evolution Reaction Majid Khan , Abdul Wali Khan University
15:45-16:10	Redox Processes on Carbon Nanomaterial Surface Proceeding in Supercapacitors and Li Batteries When Potential is Applied Ekaterina Fedorovskaya , Lappeenranta University of Technology
16:10-16:35	Mediator-Assisted Catalysis of Polysulfide Conversion in Lithium-Sulfur Batteries Hualin YE , National University of Singapore
16:35-16:55	Novel Cu-based perovskites for Solid Oxide Cells Keyun LI , AGH University of Science and Technology

Session Topics 8: Public Security and Emergency Management

➤ **Time (GMT+8): May 26, Thursday**

Time	Title
Moderator: Aibin LI	
14:00-14:15	From Survival Security to Growth Security: Rethinking Urban Security and Trends from Humanism Wei LIU , China University of Mining and Technology
14:15-14:30	Should Nonprofits Prioritize Self-Capacity Enhancement or Collaboration with Public Institutions? —Different Mediating Roles of Legitimacy in Charitable Donation Acquisition Yaqiong ZHAO , China University of Mining and Technology
14:30-14:45	Changes and New Trends of Emergency Management Policy Paradigm ——Based on the Analysis of Policy Texts at the Central Level Mengxiao DING , China University of Mining and Technology
14:45-15:00	How to Measure the Safety Cognition Capability of Urban Residents? An Assessment Framework Based on Cognitive Progression Theory Yachao XIONG , China University of Mining and Technology
15:00-15:15	Research on Data-Driven Smart City Risk Identification Mechanism in Jiangsu Province Rui ZHANG , China University of Mining and Technology



15:15-15:30	The Triple Risks of Sudden Network Public Opinion Responsive Governance and the Smart Governance Strategies—Based on the Perspective of Communication Political Economy Xiaoyan CUI , China University of Mining and Technology
15:30-15:45	Research on Undergraduate Talent Training Path of Emergency Management in Colleges and Universities Based on Post Competency Chenmeizi YANG , China University of Mining and Technology
15:45-16:00	Theoretical Proposition and Development Strategy Choice of China's Coal Mining in the New Era Huiping FAN , China University of Mining and Technology
16:00-16:15	Break
Moderator: Xiaoshun LI	
16:15-16:30	Analysis of Conflicts in County-Level Territorial Spatial Planning: Conflict Issues and Relationships Aibo SUN , China University of Mining and Technology
16:30-16:45	Spatial and Temporal Intensity of Improvement and Degradation Effects of Vegetation Cover in the Coal Mining Area of Ordos City Qinyu WU , China University of Mining and Technology
16:45-17:00	UAV Multispectral Image for Monitoring Vegetation Community Diversity in Semi-Arid Mining Area Zanxu CHEN , China University of Mining and Technology
17:00-17:15	Research on Property Rights and Interests of Mining Land in China from the Perspective of Life Cycle Yimo LAI , China University of Mining and Technology
17:15-17:30	Research on Ecological Protection and High-Quality Development of Coal Mining Area in Yellow River Basin Based on New Development Concept Xueli ZHONG , China University of Mining and Technology
17:30-17:45	Examining the Interactive Coupling Relationship between Land Space Development and Eco-Environment from the Perspective of Symbiosis: Case Study of Henan, China Xiaotong XIE , China University of Mining and Technology
17:45-18:00	How does the Production-Living-Ecological Functions of Land Use Evolve with Rapid Urbanization? Evidence from Jiangsu Province, China Weikang HE , China University of Mining and Technology
18:00-18:15	How to Resolve the Conflicts of Urban Functional Space: A Perspective of Urban Moderate Boundary Xizhao LIU , China University of Mining and Technology
18:15-18:30	Coupling Coordination Measurement and Driving Mechanism of the Water-Energy-Food in the Yellow River Basin, China Dengyu YIN , China University of Mining and Technology

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Xiaolin XU	
08:30-09:00	Transport and Environment Under the Impacts of COVID-19 Junyi ZHANG , Hiroshima University



09:00-09:30	New Security Perspective in a Time of Global Turbulence, Fast Technological Change, and Green Development Imperative Gerald Z. LAN , Tsinghua University & Arizona State University
09:30-10:10	Disaster Prevention and Mitigation Policy in Japan -- The Interpretation of White Paper on Disaster Management Yoshiaki Osada , GK Design Group
10:10-10:25	Break & Discussions
Moderator: Gerald Z. Lan	
10:25-10:40	Accident Cause Mechanism and Dual Prevention Theory Based on Hazard and Hidden Danger Quanlong LIU , China University of Mining and Technology
10:40-10:55	A Study on Influencing Factors of County-Level Emergency Management Performance: An Analysis Based on Structural Equation Wendong XU , China University of Mining and Technology
10:55-11:10	Exploring 'Ritualized Institutions': Public Health Emergency Plans in China's Rural Communities Jiayi TANG , Fudan University
11:10-11:25	Impact of Urban Maintenance and Construction Investment on the Security Sense of Urban Residents' Public Facilities—Based on the Mediating Role of Residents' Trust in Government Wei SHI , China University of Mining and Technology
11:25-11:40	The Effects of Government Effectiveness on Citizen Satisfaction in Public Health: Moderating Role of Government Credibility Junliang ZHAI , China University of Mining and Technology
11:40-11:55	Assessment Study on the Ecological Restoration Effect of Large Coal Power Bases in the Eastern Grassland Area Yongfeng LI , China University of Mining and Technology

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Yibao WANG	
14:00-14:30	Governance Capacity and Governance Legitimacy -- Challenges in Crisis Management Tom Christensen , University of Oslo
14:30-15:00	Big Data and Machine Learning in Smart Mobility Decisions Tao FENG , Hiroshima University
15:00-15:30	Paradox Theory and Crisis Management: The Case of COVID-19 Pandemic Control in China Liang MA , Renmin University of China
15:30-15:45	Break & Discussions
Moderator: Feng WANG	
15:45-16:00	The Influence of Micron-Sized Soil Particles on the Settlement-Consolidation Evolution Process of Tailings under Confined Conditions Xuanyi CHEN , Chongqing University of Science and Technology
16:00-16:15	Identification of Critical Factors of Urban Resilience under Public Health Events Based on the ISM Model and a Complex Network: A Case Study of Jiangsu Province in China Yueqian ZHANG , China University of Mining and Technology



16:15-16:30	Research on Resilient Governance of Grass-Roots Communities under Sudden Public Events Xuan DONG , China University of Mining and Technology
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Session Topics 9: Clean Processing and Conversion of Energy Resources

➤ Time (GMT+8): May 26, Thursday

Time	Title
Moderator: Lang XU, Jinpeng QIAO	
14:00-14:30	Social Awareness and Public Acceptance of Carbon Capture and Storage (CCS): Research in Poland Dariusz Wojakowski , AGH University of Science and Technology
14:30-15:00	Optimizing the Electrocatalytic Performance of Coal-Based Carbon Materials Lang XU , China University of Mining and Technology
15:00-15:20	CFD Intensification of Coal Beneficiation Process in Gas-Solid Fluidized Beds Yong ZHANG , Institute of Process Engineering, Chinese Academy of Sciences
15:20-16:00	Poster Session, Afternoon Tea
16:00-16:20	Numerical Simulation Research on Particle Slip Velocity under Turbulent Flow Zhixin SUN , China University of Mining and Technology
16:20-16:40	Segregation Dynamics of Particles in Granular Bed Jinpeng QIAO , China University of Mining and Technology
16:40-17:00	Machine Learning Prediction of Calorific Value for Coal Based on the Hybrid Analysis Zhiqiang LI , China University of Mining and Technology
17:00-17:20	Enhanced Fluidization of Solid Particles in an Oscillating Acoustic Field Xuan XU , China University of Mining and Technology

➤ Time (GMT+8): May 27, Friday

Time	Title
Moderator: Haijun ZHANG, Chad LIU	
08:30-09:00	Production of Kerosene Range Fischer-Tropsch Products Using Multi-Component Catalysts Supported on Activated Carbon Avinashkumar Karre , West Virginia University
09:00-09:30	TBD Qingxia LIU , Shenzhen Technology University
09:30-10:00	Key Technology for Efficient Screening of Moist Mine Solid Waste Chenlong DUAN , China University of Mining and Technology
10:00-10:20	Poster Session, Morning Tea
10:20-10:40	Research Progress of 1 mm, 0.8 mm Dry Deep Flip-Flow Screening Technology Weinan WANG , China University of Mining and Technology



10:40-11:00	Application of Coal Tar-Based Collector in the Flotation Removal of Unburned Carbon from Fly Ash Kanghao ZHENG , China University of Mining and Technology
11:00-11:20	Developments and Applications of Sensor-Based Sorting in Mining Industry: REE in Case Xishun WU , International Mining Researching Center, CGS
11:20-11:40	Emission of N and S Species during Pyrolysis and Gasification of Low-Rank Coal in an Entrained Flow Reactor Tao XU , Xi'an University of Science and Technology
11:40-12:00	Properties of Bulk Micro-Nanobubbles Prepared by Hydrodynamic Cavitation: Effects of the Preparation Time and Aeration Rate Shaoqi ZHOU , China University of Mining and Technology

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Chenlong DUAN, Yuqing FENG	
14:00-14:30	Development and Application of CFD Models for Multiphase Complex Flow Systems in Mineral Processing Industry Yuqing FENG , The Commonwealth Scientific and Industrial Research Organisation
14:30-14:50	Research of Collision Mechanics Model and Time-Frequency Characteristics during Multi-Stage Variable-Inclination Screening Process for Clean Coal Long HUANG , China University of Mining and Technology
14:50-15:20	Poster Session, Afternoon Tea
Moderator: Chenlong DUAN, Haishen JIANG	
15:20-15:40	Precise Characterization of Three-Dimensional Structure and Permeability of Coal-Based Porous Media Jiarui SUN , China University of Mining and Technology
15:40-16:00	Graphite Flotation by β-Cyclodextrin, Kerosene Pickering Emulsion as a Novel Collector Jixuan GAO , China University of Mining and Technology

Session Topics 10: Resource Development and Utilization of Underground Space

➤ **Time (GMT+8): May 26, Thursday**

Time	Title
Moderator: Shengqi YANG	
14:10-14:25	Opening Ceremony for 10th Parallel Session (Ranjith PG, Yingxin ZHOU)
Moderator: Ranjith PG	
14:25-14:55	Towards Sustainability and Low Carbon: Singapore Prospective CF Leung , National University of Singapore



14:55-15:25	Reservoir-Condition Pore-Scale Imaging of Multiphase Flow in Porous Rocks Guanglei ZHANG , Imperial College London
15:25-15:55	The Field Enriched Finite Element Method for Crack Propagation and Coalescence Xiaoping ZHOU , Wuhan University
Moderator: Shengqi YANG	
15:55-16:25	Induced Seismicity in Deep Rock Excavation: Implications and Challenges Wei WU , Nanyang Technological University
16:25-16:45	Underground Workings Wet Floor Heave Modelling – the New Method Piotr Malkowski , AGH University of Science and Technology
16:45-17:05	A Real-Time Arrivals Picker for Microseismic Waveforms Based on Deep Learning Bingrui CHEN , Institute of Rock and Soil Mechanics, Chinese Academy of Sciences
17:05-17:25	Modern Tendencies in Developing the Theory of Endurance of Geomaterials and Reverse Problems of Nonlinear Geomechanics Chanyshv Anvar Ismagilovich , Federal State Budgetary Institution of Science Institute of Mining named after N. A. Chinakal, Siberian Branch of the Russian Academy of Sciences Novosibirsk, Russian Federation
Moderator: Wei WU	
17:25-17:40	Concept of an Integrated Registration Approach for Underground Cavities Malte Jan Michael Gurgel , RWTH Aachen University
17:40-17:55	Cooperative Project (CUMT, RWTH) on an Underground Pumped Storage Power Plant (UPSP) Maike Kroll , RWTH Aachen University
17:55-18:10	Determination of Dynamic Biot's Coefficient for a Sandstone from Kielce, Świętokrzyskie, Poland Mohammad Zamani Ahmad Mahmoudi , AGH University of Science and Technology
18:10-18:25	Transformation into Museums as the Chance of Second Life for Former Coal Mines in Poland: Social Aspects of Projects Łucja Kapralska , AGH University of Science and Technology

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Hanpeng WANG	
08:30-08:50	Research on Four-Dimensional Efficient Construction and Reuse of Underground Space in Deep Coal Mines Zhanguo MA , China University of Mining and Technology
08:50-09:10	Uncertainty Analysis for the Heat Production from a Heterogeneous Artificial Geothermal Reservoir Jianguo WANG , China University of Mining and Technology
09:10-09:30	Deformation and Failure Behavior of Transversely Isotropic Composite Rock under Different Confining Pressures Shengqi YANG , China University of Mining and Technology



09:30-09:50	Correlation between Fluid Injection and Induced Seismicity in Faulted Geothermal Reservoirs: Insights from Data-Driven Analyses and Numerical Modelling Wu CAI , China University of Mining and Technology
Moderator: Zhanguo MA	
09:50-10:05	Experimental Investigation into the Mechanical Behaviour of Jointed Rock Using Sand Powder 3D Printing Lishuai JIANG , Shandong University of Science and Technology
10:05-10:20	Temporal and Spatial Distribution Characteristics of Hydraulic Crack Propagation under True Triaxial Loading Using the Direct Current Method Nan LI , China University of Mining and Technology
10:20-10:35	Strong Sliding Floor Heave Mechanism and Active Anti-Sliding Controlling Technology of Concrete Filled Steel Tube Pile in Deep Roadway Lihui SUN , Hebei University of Engineering
10:35-10:50	Evaluation of Carbon Dioxide Geological Sequestration Potential in Coal Mining Area Shiqi LIU , China University of Mining and Technology
Moderator: Wu CAI	
10:50-11:05	Mechanical Behavior of Sandstone Specimens Saturated in Brine: Experimental Study and Particle Mechanics Approach Yanhua HUANG , China University of Mining and Technology
11:05-11:20	Mechanical Behavior of Thermal Treated Granite under Cyclic Loading-Unloading Compression Investigated by GBM2D Wenling TIAN , China University of Mining and Technology
11:20-11:30	The Thermo-Hydro-Mechanical (T-H-M) Coupled Effect on the Macro Mechanical Response of the Granite and its Meso-Mechanism Mengyi LI , Wuhan University
11:30-11:40	Effect of Permeable and Anisotropic Coal Reservoirs on CO₂-ECBM Ziliang WANG , China University of Mining and Technology
Moderator: Shiqi LIU	
11:40-11:50	Comparison of Various Rock-Physical Elastic Parameters in Surrounding Rock Classification Haicheng XU , China University of Mining and Technology
11:50-12:00	Experimental Study on Rock Breaking with Conical Pick and Abrasive Water Jet Gridding Pre-Cutting Combined Method Xin ZHOU , China University of Mining and Technology
12:00-12:10	Experimental Study of Acoustic Emission Multi-Parameter Information Characterizing Rock Crack Development Jing YANG , China University of Mining and Technology
12:10-12:20	Study on Mechanical Properties and Deformation of Coal under Different Confining Pressure and Strain Rate Ye LI , China University of Mining and Technology



➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Xiaowei FENG	
14:00-14:20	Key Technology of Rock Mechanics Experiment with Multi Strain Rate Dynamic and Static Load Superposition Hanpeng WANG , Shandong University
14:20-14:40	Pendulum Type Waves and Present Problems of Mechanico-Mathematical Modelling Aleksandrova N.I. , Federal State Budgetary Institution of Science Institute of Mining named after N. A. Chinakal, Siberian Branch of the Russian Academy of Sciences Novosibirsk, Russian Federation
14:40-14:55	Analysis of Stability Tunnel Based on Rock Mass Classification in Kalilingseng Kulon Progo Singgih Saptano , Universitas Pembangunan Nasional Veteran Yogyakarta
14:55-15:05	Acoustic Emission (AE) Characteristics of Rock under the Disturbance Stress Paths Donghao LAN , China University of Mining and Technology
15:05-15:15	Study on the Characteristics of the Anchorage Body under Combined Deformation Fengyu ZHOU , China University of Mining and Technology
Moderator: Jianguo WANG	
15:15-15:30	The Influence of Bond Properties on Rock Bolt Pull-Out Test Xiaowei FENG , China University of Mining and Technology
15:30-15:40	Seismic-Derived Discrete Fracture Networks Method to Understand the Correlation between Fluid Injection and Induced Seismicity in Faulted Geothermal Reservoirs Min Zhou , China University of Mining and Technology
15:40-15:50	Research on Support Design of Jointed Rock Roadway Based on Bonded Block Model and Hybrid Bolt Components in 3DEC Ruijie WANG , China University of Mining and Technology
15:50-16:00	Experimental Study on Pavement Base Performance of Cement and Fly Ash Stabilized Slag-Coal Gangue Pengfei YAN , China University of Mining and Technology
16:00-16:20	Tectonic Classification and Deep Structure of Consolidated Basement and Platform Cover of North Eurasia Alexandr S. Egorov , St. Petersburg Mining University
16:20-16:30	Analysis of Wear Mechanism and Prediction of Wear Quantity of Disc Hob of Shield Machine Penghui ZHANG , Qingdao University of Technology



Session Topics 11: Green and Low-Carbon Technology for Urban and Rural Construction

➤ Time (GMT+8): May 26, Thursday

Time	Title
Moderator: Yupeng WU	
14:00-14:40	Practice of Green Urban-Rural Construction in Jiangsu Province Dawei LIU , Jiangsu Housing and Urban-Rural Development Department
14:40-15:20	Innovation through Tradition: The Humanistic Design Concept and Practice Approach of Continuing Regional Green Architecture Zhengong FENG , ARTS Group Co., Ltd.
15:20-15:50	Climate-Configuring Model of Vernacular Architecture, an Inherent Conversion Structure between Climate, Space and Energy Tong ZHANG , Southeast University
15:50-16:30	Building Sector Embodied Emissions in China – Opportunities and Challenges to Achieving Carbon Neutral Wei FENG , Lawrence Berkeley National Laboratory
16:30-16:50	Advanced Façades for End User Energy Demand Reduction: A Comprehensive Evaluation from the System Development to the Occupants' Perceptions Yupeng WU , The University of Nottingham
16:50-17:10	Artificial Intelligence Based Detection Approach to Assist Demand-Driven Heating, Ventilation, and Air-Conditioning (HVAC) Systems John Calautit , University of Nottingham
17:10-17:30	Research on the Calculation Technology and Design Optimization Method of Carbon Emissions in the Whole Life Cycle of Buildings Hong ZHANG , Southeast University
17:30-17:50	Application of Computer Vision Technologies in Collecting HVAC Control Signals Bin YANG , Tianjin Chengjian University
17:50-18:10	Carbon Emissions of Campus Buildings Based on Machine Learning Wei TIAN , Tianjin University of Science and Technology
18:10-18:30	Exploration and Practice of Resilience System for Sustainable Emergency Architecture Junjie LI , Beijing Jiaotong University

➤ Time (GMT+8): Day 2, 2022-05-27 Friday

Time	Title
Moderator: Yun ZHANG	
08:30-08:50	Circular Building and Infrastructures: Some Reflections of Practices in South Australia Jian ZUO , The University of Adelaide
08:50-09:10	Design and Evaluation of Solar Technology Integration for Zero Carbon Buildings Li ZHU , APEC Sustainable Energy Center (APSEC)



09:10-09:30	From 0 to 1 Ning XU , Fanpower Laboratory
09:30-10:10	Break
09:50-10:10	Towards Climate Adaptability of Buildings: Modeling Building Envelope with Phase Change Materials Yan LIU , Xi'an University of Architecture and Technology
10:10-10:30	Study on Optimization of Urban Carbon Emissions Peaking Path—Taking Dongtou District of Wenzhou as an Example Tao WANG , Chongqing University
10:30-10:50	Precise Evaluation of Light Pollution of Urban Landscape Lighting Qi YAO , Fudan University
10:50-11:20	Integration Technics on Insulation with Structure on Conservative Buildings Jinfeng XU , Jiangsu Research Institute of Building Science
11:20-11:50	Practice of New Building Industrialization in Jiangsu Province Xuemei SUN , Jiangsu Provincial Construction Standard Administration

➤ **Time (GMT+8): May 27, Friday**

Time	Title
Moderator: Liang SUN	
14:00-14:20	University-Led Innovations of Green and Low-Carbon Residence in Solar Decathlon China 2021 Yuan TIAN , SDC Committee
14:20-14:40	Prefabricated Green Rural Residence Based on Solar - Hydrogen Energy System-- The Participating Building of the 2021 Solar Decathlon China Zhen MENG , Xi'an Jiaotong University
14:40-15:00	Calculation and Assessment of Life Cycle Carbon Emissions of Buildings for the Whole Design Process Zhixing LUO , Xi'an University of Architecture and Technology
15:00-15:30	The Green Construction Practice Based on Carbon Peaking and Carbon Neutrality Goals Congxiao LI , China Construction Science & Technology Group CO., LTD.
15:30-15:50	Starting from "Zero" -- Practice with the Clue of Energy Efficiency, Zero Energy and Energy Plus under Carbon Peaking and Carbon Neutrality Goals Gang YAO , China University of Mining and Technology
15:50-16:20	Practice and Development of Assembled Decoration Based on Carbon Peaking and Carbon Neutrality Goals Jie WANG , Nanjing Yangtze River Urban Architectural Design CO., LTD.



Keynote Speakers



Prof. Vladimir Litvinenko

Russia

Saint Petersburg Mining University

Biography

Professor Vladimir S. Litvinenko, Doctor of Technical Sciences, full member of the International Academy of Sciences of Higher Education, Academician of the Russian Academy of Natural Sciences, has headed the Mining University as the Rector since June 1994.

Professor, Litvinenko V.S. is the author of more than 150 scientific papers, including 5 monographs, 28 (including foreign) patents and inventions, laureate of the State Prize of the Russian Federation in the field of science and technology for the "Geological Atlas of Russia", laureate of the Government of the Russian Federation in 2008 in the field of science and technology, for the development and implementation of environmentally friendly combined technologies for the extraction and complex processing of ores, ensuring the commissioning and development of the unique Yakovlevskoye rich iron ore deposit.



Prof. Changwen MIAO

China

Southeast University

Biography

Professor Changwen MIAO, Academician of Chinese Academy of Engineering (CAE), building materials expert, Professor and Doctoral Supervisor of Southeast University, Director of the Academic Committee of Southeast University, Chairman of International Joint Laboratory for Advanced Civil Engineering Materials, and Chairman of International Green Building Alliance.

He has been engaged in theoretical research on civil engineering materials and application research on engineering technology for a long time, has made great contributions in the research areas of key technology of crack resistance of concrete, service life extension and durability improvement of major infrastructure engineering, and multifunctional materials for civil engineering, and successfully passed the inspection of major engineering project construction. He has successively won 3 second prizes of the National Science and Technology Progress Award, 1 second prize of the National Invention Award, 6 first prizes of the Provincial and Ministerial Science and Technology Progress Award, 82 national invention patents, published 4 monographs and more than 200 papers. He enjoys a high reputation in the world for his achievements.



Prof. Jerzy Lis

Poland

AGH University of Science and Technology

Biography

Prof. Dr. Eng. Jerzy LIS, Full Member of the Polish Academy of Science and member of the World Academy of Ceramics, professor in materials science and chemical technology. Rector of the AGH UST for the tenure of 2020-2024.

His main research and application activities focus on Materials Science & Engineering in the field of ceramic materials for structural and functional applications in constructions for the machine-building, automotive, aviation, military, aerospace, electronics, and other industries. In research he is known mainly by works on advanced materials prepared by combustion synthesis SHS and Laser Manufacturing and traditional ceramics.

His scientific achievements contain 388 publications in journals and proceedings, more than 1250 citations in SCOPUS, over 180 presentations on conferences, 18 patents, managing of 15 R&D projects as well as international cooperation with academic and research centres in e.g. US, Russia, Germany, Japan, France or Spain.

He is the Honorary Fellow of European Ceramic Society and member of International Society of Self-Propagating High-Temperature Synthesis, American Ceramic Society, Polish Ceramic Society, Polish Materials Society (its former president). He is also President of International Affairs Committee of Association of Academic Schools Rectors in Poland and Vice-President of Association of Polish Technical Universities Rectors.



Prof. Jan Cilliers

UK

Imperial College London

Biography

Jan Cilliers is Professor of Mineral Processing and was Head of Department of Earth Science and Engineering in the Royal School of Mines at Imperial College London, where he leads the Rio Tinto Centre for Advanced Mineral Recovery, which was established at Imperial College in 2008 to develop new technologies in block caving, leaching and flotation.

After studying Minerals Engineering, and working both underground and above on the South African gold and platinum mines, he did his PhD in Cape Town. He moved to the UK in 1993, where he established his flotation research team, uniquely specialising in the role of the froth in separating minerals. His research develops complex physical models and measurement techniques to improve mineral separations.

He serves on the International Mineral Processing Council, and leads the Commission on Education. In 2010 he was made a Fellow of the Royal Academy of Engineering. He is also a fellow of both The Institution of Chemical Engineers and The Institution of Materials, Mining and Metallurgy.



Prof. Yingxin ZHOU

Singapore

Academy of Engineering Singapore

Biography

Professor Yingxin ZHOU is a mining engineer with more than 30 years of experience in research, engineering, and teaching in rock engineering and underground space technology. He played leading roles in several major pioneering rock engineering and research projects and served as technical advisor to many government ministries in Singapore. He led the rock engineering and technology development for the underground ammunition facility in Singapore and developing new safety standards for underground ammunition storage which have been adopted by NATO.

Prof. Zhou is a Fellow of the Academy of Engineering Singapore and Fellow of the International Society for Rock Mechanics and Engineering (ISRM). He has been Director (Asia) and a Board Member of the Associated research Centers for the Urban Underground Space (ACUUS) since 2013. He served as ACUUS Vice President during 2013-2016 and ISRM Vice President (Asia) during 2011-2015. He received the Defence Technology Prize 2018 Individual (Engineering) Award and was twice featured in the Institute of Engineers Singapore (IES) Who's Who in Engineering in Singapore in 2013 and 2020.



Poster Presentations



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444	Hanhu LIU*, Bo FU, Meng LI, Hongzhen ZHANG, Shuangsheng ZHANG	China University of Mining and Technology	Study on Health Risk Assessment and Remediation Technology of a Chromium Contaminated Site
442	Qiu DU, Guangli GUO*, Huaizhan LI, Yaqiang GONG	China University of Mining and Technology	Study on Ground Subsidence Rules in Deep Mining with Giant-Thick and Weakly Cemented Overburden Based on SBAS-InSAR
306	Hewei ZHANG, Jian SHEN*, Kexin LI, Rendong WEN, Xiuming JIANG, Lei DU, Junjie TAO	China University of Mining and Technology	Precise Distinction of Mechanical Behavior Stages of Coal under Temperature-Pressure Constraints and Its Permeability and Energy Consumption Characteristics
295	Xianming ZHAO, Yajun SUN, Zhimin XU	China University of Mining and Technology	The Three-zones Division and Evolution Mechanism of Water Quality in The Mining Area of Northwest China
292	Xiong SONG, Tongjun CHEN, Wan LI	China University of Mining and Technology	Study on the acoustic characteristics of tectonically deformed coal in Huaibei Coalfield
291	Weidong XIE, Meng WANG, Jiyao WANG, Zhenghong YU, Hua WANG, Xiaoyu WU, Taifei WU	China University of Mining and Technology, China University of Geosciences	Adsorption behavior and mechanism of CO ₂ in Longmaxi shale gas reservoir
290	Jie ZHU, Tangsha SAHO, Yuhan ZHAO, Quanqi WANG, Lin LI	China University of Mining & Technology (Beijing)	Characteristics of Permeability Evolution and Pore Structure of Coal with High Gas
191	Yiyan ZHANG	China University of Mining and Technology	Assessment and spatial-temporal analysis of landscape multifunction in the consolidated area along ancient Yellow River



ID	Authors	First author organization	Report Title
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147	Weibing YIN	China Coal Jinzhong Company Shanxi Xingxian China Resources & LASEN Chejiazhuang Coal Industry Co., Ltd	Exploration and practice of relationship between individual operation safety and physical behavior based on the big data analysis
76	Susheng WANG*, Shengqi YANG	China University of Mining and Technology	Research on damage model of quasi-brittle rock by considering localization effect
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145	Yanni CHENG	JinNeng Holding Coal Industry Group	Exploring design and application of "wind, water and electricity" linkage control of intelligent mine
136	Guohua LIU, Ang JI	China University of Mining and Technology	Research on landscape design of high density residential area based on alleviating space oppression

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