中国岩石力学与工程学会

Chinese Society for Rock Mechanics & Engineering

NEWSLETTER

Chinese Society for Rock Mechanics & Engineering

2024 Q1 & Q2

Content list

About the Society

Member Services

President corner

Dear Members,

As President of the Chinese Society for Rock Mechanics and Engineering (CSRME), I am honored to extend my warm greetings to all of you.

It is with great pleasure that I introduce the inaugural edition of our newsletter, which serves as a platform to showcase the latest research advancements, opportunities, and challenges in the field of rock mechanics in China. Through this newsletter, we aim to foster collaboration and exchange of ideas among professionals and organizations within our community, as well as with our esteemed

colleagues from around the world.

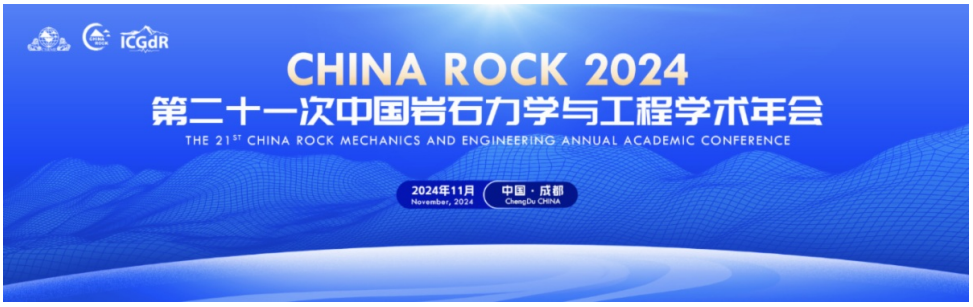
Rock mechanics plays a crucial role in various engineering disciplines, ranging from civil and mining engineering to geology and environmental science. As such, it is imperative that we stay informed about the latest developments in our field and work together to address the emerging challenges and opportunities.

I encourage all of our members to actively contribute to the newsletter by sharing their research findings, insights, and experiences. Your contributions will enrich our collective knowledge and contribute to the advancement of rock mechanics both in China and globally.

I extend my heartfelt gratitude to the editorial team for their dedication and hard work in bringing this newsletter to fruition. I am confident that it will serve as a valuable resource for our community and contribute to the continued growth and success of the CSRME.

Thank you for your continued support and participation.

CHINA ROCK 2024



The 21st China Rock Mechanics and Engineering Annual Academic Conference will be held in **Chengdu** on **November 1-3, 2024**.

CHINA ROCK is the annual academic conference of the Chinese Society for Rock Mechanics and Engineering (CSRME). At the 20th CHINA ROCK in 2023, it featured **a main venue in Beijing, 13 central venues, and 191 satellite venues**, attracting a total of **118,600** participants from universities, research institutes, and related

enterprises.

The CHINA ROCK 2024 will continue the successful format from 2023, with a main venue in Chengdu, 15 central venuess in 15 different cities, and more than 20 satellite venues.

Abstracts submission deadline is August 14, 2024. There are three ways to publish your paper:

1. Publication in Society-sponsored and collaborative journals.
2. Conference Proceedings.
3. Conference Abstracts.

Technical trainings and an exhibition of science and technology innovation in industry will also be featured. Click **here** for more details about CHINA ROCK 2024.

Join us in Chengdu for this unparalleled academic event!

Conferences/Workshops

Focused Workshop on Definition of Rockbursts

From February 1st to 4th, 2024, the ISRM Commission on Rockburst hosted a focused workshop in the field of rockbursts in Beijing, focusing on the theme of "Definition of Rockburst."

This workshop marks the inaugural session of a series of workshops, which are jointly initiated by Professor Manchao He, the Chairman of the ISRM Commission on Rockburst, in collaboration with three other professors during the ISRM Congress held in Austria in October 2023. This series of workshops is planned to be organized in rotation as part of the ISRM Commission on Rockburst's ongoing efforts. The aim of the workshop is to engage in in-depth discussions on professional issues in the field of rockburst. The four initiators of the workshop are:
Professor Manchao He from China University of Mining and Technology (Beijing);
Professor Ismet Canbulat from the University of New South Wales;
Professor Fidelis T Suorineni from Nazarbayev University in Kazakhstan;
Professor Murat Karakus from the University of Adelaide.

The workshop this year is organized by the ISRM Commission on Rockbursts and co-hosted by the State Key Laboratory of Tunnel Engineering and the Chinese Society of Rock Mechanics and Engineering. The objective of this workshop is to systematically define and refine **the concept of rock bursts** and to bridge the gap in understanding and resolve ambiguities in the field of rockbursts. During the deliberations, a groundbreaking perspective on rockburst definition emerged: "**A rock burst is a sudden failure of rock mass surrounding the excavations caused by the rapid release of stored energy when induced stresses exceed the rock strength.**"

The next workshop is planned to be held in Adelaide.

Workshop on Earthquake and Trace Active Faults and IULEE Council Meeting

From February 27 to 29, 2024, the Workshop on Earthquake and Trace Active Faults and the Council Meeting of the International Union Laboratory for Energy and Environment (IULEE) were held in Beijing and Sanmenxia City. The event was jointly hosted by the CPC Sanmenxia Municipal Committee, the Sanmenxia Municipal

Government, the Chinese Society for Rock Mechanics and Engineering, among others. The meeting was chaired by Professor Manchao He, Chairman of the Chinese Society for Rock Mechanics and Engineering.

The conference brought together renowned experts to discuss the latest theories and innovative methods in key areas such as **cross-fault measurement for earthquake prediction and earthquake forecasting**. On the 29th, the Council of the International Joint Laboratory for Energy and Environment reviewed the work reports, and approved the charter, member units, and council member list. The new council, composed of **24 laboratories from seven countries**, aims to continue promoting more industrialized research outcomes.

During the conference, representatives visited the Heshi Steel Production Base project and the Yellow River Ecological Corridor.

Technical committees

Railway Tunnel under Modaokeng Reservoir in China

Recently, the construction of railway shield tunnel under Modaokeng reservoir in Guangdong province, China, a section of Guangzhou East station to Huadu Tiangui intercity railway (Guanghua intercity), has been successfully completed by **China Railway 15th Bureau Group Co., Ltd.** within 11 days.

- **The world's first large-diameter double shield-EPB dual-**

mode tunnel boring machine (TBM), named “Tiebing Guanghua No.6”, and the same TBM equipped with earth pressure dual-mode double-shield shield machine, named "Tiebing Guanghua 5" were adopted.

- Water cofferdams were installed to address the high groundwater level.

- The slope of the belt conveyor was specially modified to solve the problem of poor slag discharge.

- The HSP advance geological prediction system was implemented to accurately forecast the geological condition under reservoir.

Journals

Rock Mechanics Bulletin

Recently, the Rock Mechanics Bulletin was indexed in the database of the Chemical Abstracts Service (CAS), a subsidiary of the American Chemical Society (ACS).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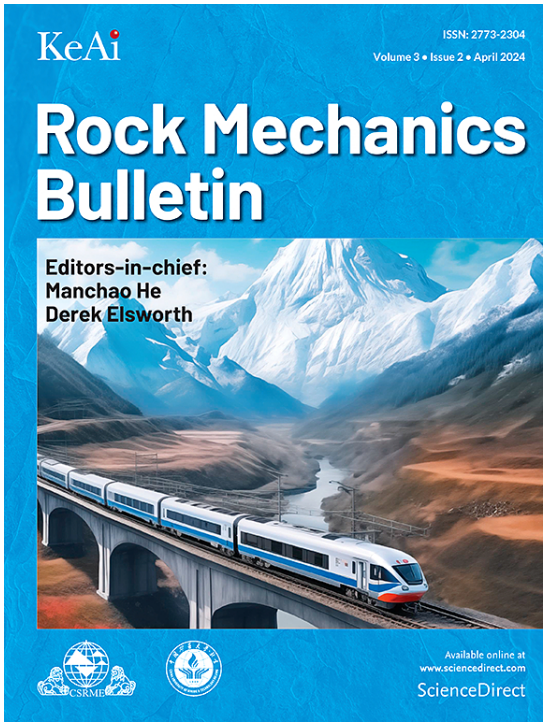
CAS

Chemical Abstracts Service (CAS), established in 1907, is a division of the **American Chemical Society (ACS)**. Over the years, CAS has evolved into the world's authority for chemical information, providing the global scientific community with access to the most current chemical and related scientific information available immediately

through databases such as CAS REGISTRYSM and CAS References.

Thanks for the support and contribution from the editorial team, reviewers, authors and readers! Currently, Rock Mechanics Bulletin has been indexed by **Scopus, DOAJ, CAS, EBSCO host, and NASA ADS**.



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Major engineering projects

Baihetan Hydropower Station

Baihetan Hydropower Station is the most technically difficult hydropower project in the world, with several key technical indicators breaking world records.

The Baihetan project is mainly for **power generation**, taking into account multitasks such as flood control, navigation, comprehensive utilization of water resources, and water ecological security, with a gross installed capacity of 16 million kilowatts, and an average annual power generation of 62 billion kilowatt-hours. After all units of Baihetan Hydropower Station are put into operation, it is able to

annually **save about 19.68 million tons of standard coal and reduce emissions of carbon dioxide by about 52 million tons**.

Planning for the construction of Baihetan Hydropower Station began in June 2010, and the main project commenced full construction in 2017. On June 28, 2021, the first generating units were commissioned and began generating electricity, and by December 20, 2022, all units had been commissioned and were fully operational. In October 2023, the cumulative power generation exceeded **100 billion kWh**.

Baihetan Hydropower Station began its construction in 2010 and has since broken numerous world records in key technical indicators. These include the world's largest installed capacity of a single million-kilowatt hydro-generator unit, the world's largest underground power station cavern group, the world's largest pressure-less flood spillway cavern group, the world's largest cylindrical tailrace surge chamber, the world's largest anti-seismic parameters of 300 m high arch dams, and the world's first full-dam application of low-heat cement concrete.

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END!

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