



# SUS2024

## The 5<sup>th</sup> International Symposium of Smart Underground Space and Infrastructures

### Innovation in Underground Construction

March 22-24, 2024

Wuhan, China

<http://sus-wuhan.cn/>

#### Introduction

With the development of the economy, people are pursuing a more harmonious and habitable living environment. The construction and utilization of underground space are developing rapidly and playing an increasingly important role in urban large-scale infrastructures. The appropriate utilization of underground space can help reduce urban traffic congestion, improve resource utilization efficiency, save energy and reduce greenhouse gas emissions. However, due to complicated geological environment, underground space planning, construction, operation and management are also accompanied by significant risks, which may lead to extremely huge economic losses and casualties, and seriously disrupt the normal operation of the city.

With the digital revolution, new concepts such as smart grid, smart building and smart city are gradually improving the efficiency and security of urban management. The conference will be around discussing the challenges for smart underground space, sharing experiences and achievements, and improving our life-cycle management ability and intelligent technology application level for smart underground space.

With the successful opening of the foreword International Symposium of Smart Underground Space and Infrastructures Conference, we warmly invite you to participate in the fifth International Symposium of Smart Underground Space and Infrastructures Conference.



**SUS2024**

## Theme & Topics

- **Challenges for underground space and tunnel engineering**
  - Risk management and resilient city
  - Renovation of existing infrastructure
  - Life-cycle maintenance
- **Smart technologies for underground space and tunnel engineering**
  - Smart monitoring and detection technology
  - Smart information system(GIS, BIM, CIM)
  - Big data and artificial intelligence in geotechnics
  - Augmented reality and virtual reality
  - Smart construction technology and equipment
  - Low-carbon and green development of underground space
- **Low-carbon development of underground space**
  - Carbon emission accounts for underground space
  - Carbon emission reduction path for underground space
  - New energy and underground space development
  - Demonstration project of zero-carbon and low-carbon underground space
- **Utilization of deep underground space**
  - Exploration of deep underground space
  - Influencing factors for deep underground space utilization
  - Plan and construction of deep underground space
  - Maintenance of deep underground space

## Hosted by

Chinese Society for Rock Mechanics & Engineering- Underground Engineering Branch  
Underground Engineering Society of Hubei Province

## Organized by

Institute of Rock and Soil Mechanics, Chinese Academy of Sciences  
Tongji University  
University of Lille (France)  
State Key Laboratory of Geomechanics and Geotechnical Engineering  
State Key Laboratory of Intelligent Manufacturing of Advanced Construction Machinery



**SUS2024**

China Railway First Group Co., Ltd.  
China Railway 11th Group Co., Ltd.  
China Railway 15th Group Co., Ltd.  
China Merchants Chongqing Communications Technology Research& Design Institute Co., Ltd  
CCCC Second Highway Consultants Co., Ltd  
China Gezhouba Group Co., Ltd  
China Gezhouba Group No. 1 Engineering Co., Ltd  
Shandong University  
Wuhan University  
Hubei University of Technology  
China University of Geosciences (Wuhan)  
Shandong Luqiao Group Co., Ltd  
Hefei University of Technology

## **Academic Committee**

### **Chairman**

Prof. Chunhe Yang, member of the Chinese Academy of Engineering,  
Institute of Rock and Soil Mechanics, Chinese Academy of Sciences (China)

Prof. Isam Shahrour, Lille University (France)

### **Vice Chairman (Alphabetical Order)**

Prof. Yujing Jiang, member of the Engineering Academy of Japan, Nagasaki University (Japan)

Prof. Haibo Li, Institute of Rock and Soil Mechanics, Chinese Academy of Sciences (China)

Prof. Quansheng Liu, Wuhan University (China)

### **Advisory committee members (Alphabetical Order)**

Xiangsheng Chen member of the Chinese Academy of Engineering

Yanliang Du member of the Chinese Academy of Engineering

Xiating Feng member of the Chinese Academy of Engineering

Chuan He member of the Chinese Academy of Engineering

Shucai Li member of the Chinese Academy of Engineering

Xinqiang Niu member of the Chinese Academy of Engineering

Shunquan Qin member of the Chinese Academy of Engineering

Mingyang Wang member of the Chinese Academy of Engineering

Fuming Wang member of the Chinese Academy of Engineering

Xianqi Xie member of the Chinese Academy of Engineering

Hehua Zhu member of the Chinese Academy of Engineering



**SUS2024**

### **Members (Alphabetical Order, to be added)**

Prof. Jose Andrade, California Institute of Technology (USA)

Prof. Fadi Hage Chehade, Lebanese University (Lebanon)

Prof. Jianxun Chen, Chang'an University (China)

Prof. Weizhong Chen, Institute of Rock and Soil Mechanics, Chinese Academy of Sciences (China)

Prof. Feng Dai, Sichuan University (China)

Prof. Daniel Dias, Grenoble University (France)

Prof. Xiuli Ding, Changjiang River Scientific Institute (China)

Prof. Mingzhong Gao, Shenzhen University (China)

Prof. Hongwei Huang, Tongji University (China)

Prof. Yujing Jiang, member of the Engineering Academy of Japan, Nagasaki University (Japan)

Prof. Yuyong Jiao, China University of Geosciences, Wuhan (China)

Prof. Zoubair Lafhaj, Ecole Centrale of Lille (France)

Prof. Liping Li, Shandong University (China)

Prof. Shuchen Li, China University of Mining and Technology (China)

Prof. Xinping Li, Wuhan University of Technology (China)

Prof. Bing Liu, Shandong University (China)

Prof. Dechun Lu, Beijing University Of Technology (China)

Prof. Qian Sheng, Institute of Rock and Soil Mechanics, Chinese Academy of Sciences (China)

Associate Prof. Wei Wu, Nanyang Technological University (Singapore)

Prof. Henglin Xiao, Hubei University of Technology (China)

Prof. Xiongyao Xie, Tongji University (China)

Associate Prof. Qianbing Zhang, Monash University (Australia)

Prof. Qingsong Zhang, Shandong University (China)

Prof. Junjie Zheng, Huazhong University of Science and Technology (China)

### **Organizing Committee**

#### **Chairs**

Prof. Weizhong Chen, Institute of Rock and Soil Mechanics, Chinese Academy of Sciences (China)

Prof. Xiongyao Xie, Tongji University (China)

Prof. Qiang Xue, Institute of Rock and Soil Mechanics, Chinese Academy of Sciences (China)

#### **Vice Chairs**

Prof. Liping Li, Shandong University (China)

Prof. Xianjun Tan, Institute of Rock and Soil Mechanics, Chinese Academy of Sciences (China)

Prof. Diansen Yang, Wuhan University (China)



**SUS2024**

## Members (Alphabetical Order, to be added)

Donghai Ai	Hanbing Bian	Jian Chen	Jianbing Chen	Zhiyuan Chen
Bowen Du	Xin Huang	Quan Jiang	Qi Li	Shaojun Li
Songqing Lin	Bin Liu	Caihua Liu	Jianjun Liu	Linjian Ma
Qingshan Meng	Chaoming Mu	Pengzhi Pan	Fei Peng	Tao Shi
Hao Tian	Hongming Tian	Changfu Wei	Guojun Wu	Suchao Xu
Xichang Xu	Zhenhao Xu	Jianping Yang	Jingqiang Yuan	Liwei Zhang
Yongtao Zhang	Zhiqiang Zhang	Liang Zhao	Wusheng Zhao	Biao Zhou
Hui Zhou	Ping Zhou	Jingfeng Wang		

## Conference Language

Chinese and English (Simultaneous translation is available)

## Conference Venue

Chutian International Hotel (Donghu Road 181#, Wuchang District, Wuhan, Hubei, China)



## Important Dates

Abstract Submission Deadline: 2024.01.31

Full Paper Submission Deadline: 2024.03.01

Early-bird Registration Deadline: 2024.03.01

On-site Registration: 2024.03.21



**SUS2024**

## Publication

Conference proceedings will be published and outstanding papers will be recommended to be published in Tunneling and Underground Space Technology, Journal of Rock Mechanics and Geotechnical Engineering and Smart Underground Engineering(a newly launched journal).

## Registration fees

Early-bird Registration: USD 350/CNY 2400

On-site Registration: USD 400/CNY 2800

Student: USD 200/CNY 1400

## Contact

Presentation: Xianjun Tan [xjtan@whrsm.ac.cn](mailto:xjtan@whrsm.ac.cn); Danhong Yu: [hdyu@whrsm.ac.cn](mailto:hdyu@whrsm.ac.cn)  
Paper Submission: Xuyan Tan [xytan@whrsm.ac.cn](mailto:xytan@whrsm.ac.cn)  
Registration: Hui Li [hli@mail.whrsm.ac.cn](mailto:hli@mail.whrsm.ac.cn)  
Exhibition or Sponsor: Yun Zhou: [yzhou@whrsm.ac.cn](mailto:yzhou@whrsm.ac.cn)

## The Host city

Wuhan is the capital city of Hubei Province in Central China. Wuhan is situated on Jiangnan Plain, a river-crossed fertile land created by the Hanjiang River joining the Yangtze River. Wuhan is a routine port for a Yangtze River cruise. Divided by the Yangtze, the city is known as the 'Three Towns of Wuhan' with Hankou and Hanyang on the west bank, and Wuchang on the east.

Not only does Wuhan offer very convenient transportation for attendees, but also is a place with both history and natural wonders such as the Hubei Provincial Museum, Yellow Crane Tower, Yangtze River Bridge, East Lake, Three Gorges Dam located at Yichang which is only 2 hours by train from Wuhan. And so on, all of which make Wuhan a top destination for all travelers. Meanwhile, with the numerous research institutes, universities and colleges, Wuhan is also the scientific and educational center in central China.



**SUS2024**

Underground space is developing rapidly in Wuhan, such as Wuhan Yangtze River-crossing Tunnel, which is the first tunnel crossing through the Yangtze River, Wuhan Yangtze River Highway and Railway Combined Tunnel with a length of 4.66km, which is the first one in the world, Underground Complex in Optical Plaza with a construction area of 560,000 square meters, Wuhan Subway with 11 lines, and so on. Put Wuhan on your itinerary and you will not be disappointed.



**SUS2024**