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CMCT



INTERNATIONAL SEMINAR

on

Tunnel Tech: Leading The Way Forward ——Resilience, Smart Technology, Low Carbon and Sustainable Development



🕒 DATE: May 21-23, 2025

📍 LOCATION: Chongqing, China

Organizers:

World Road Association (PIARC)
China Merchants Chongqing Communications Technology
Research & Design Institute Co., Ltd. (CMCT)

Co-Organizers:

China National Engineering Research Center of Road Tunnel (NERCRT)
Tunnel Engineering Branch of China Highway and
Transportation Society (TEB of CHTS)
International Tunnelling and Underground Space Association (ITA)

01 // GENERAL INFORMATION

ABOUT ORGANIZERS

PIARC

PIARC is the World Road Association founded in 1909 as a non-profit and non-political association. It is the first global forum for the exchange of knowledge, policy and practice on roads and road transport.

PIARC has 4 key missions:

- Be a leading international forum for analysis and discussion of the full spectrum of transport issues related to roads and related transport;
- Identify, develop, and disseminate best practice and give better access to international information;
- Consider within its activities the needs of developing countries and countries in transition fully; and
- Design, produce, and promote efficient tools for decision making on matters related to roads and related transport.

CMCT

China Merchants Chongqing Communications Technology Research & Design Institute Co., Ltd. (CMCT) was established in 1965 and is a key player in the transportation and infrastructure sectors.

It is recognized as a national high-tech enterprise and innovation leader, with over 700 senior professionals, including academicians and national design experts. CMCT specializes in areas such as mountainous road construction, smart maintenance, vehicle-road collaboration, and inland waterway development. The company also incubates successful high-tech firms like Zhixiang, Wanqiao, Huachi, and China Merchants Road Inspection.

ABOUT CO-ORGANIZERS

NERCRT

The National Engineering Research Center of Road Tunnel (NERCRT) is established by the National Development and Reform Commission, guided by the Ministry of Transport, managed by China Merchants Group as the competent department, and led by CMCT. It is the only national engineering research center in the field of road tunnels in China. It focuses on research and innovation in road, urban, underwater, and rail transit tunnels, supporting national strategic tasks, promoting the application of related technical achievements, and driving industrial development.

TEB of CHTS

The China Highway and Transportation Society (CHTS) was established in 1978, and it is a national society affiliated with the China Association for Science and Technology (CAST) and receives professional guidance from the Ministry of Transport. The CHTS currently has 14 branches, among which the Tunnel Engineering Branch (TEB) was established in 1991 and is affiliated with CMCT. The purpose of the branch is, under the leadership of the CHTS, to actively connect with scientific and technical personnel engaged in the field of tunnels and underground engineering. It widely carries out academic activities focusing on technical issues in planning, design, construction, supervision, maintenance, and operational management during the construction process, aiming at improving the technical level of China's road tunnels and promoting technological progress in the industry.

ITA

The International Tunnelling and Underground Space Association (ITA), promote sustainable development of tunnels and underground spaces. It holds consultative status with the United Nations, aligning its strategies with the UN's Sustainable Development Goals (SDGs). ITA focuses on sharing technical knowledge, advocating best practices, and fostering global collaboration among its 80 Member Nations 300 Affiliate Members, and around 150,000 individuals and corporations internationally. Through specialized working groups, committees, industrial research partners and training platforms, ITA advances innovation, safety, and efficient use of underground infrastructure through knowledge exchange and international advocacy in technical, industrial and commercial fields for the betterment of the world for present and future generations of peoples and planet.

TECHNICAL COMMITTEE 4.4

Sustainable Road Tunnel Operations

PIARC's Technical Committee 4.4 "Tunnels" (TC4.4) conducts an ongoing activity on all matters relating to the operation of road tunnels: geometry, equipment and maintenance, operation, safety and environment. In the current PIARC work cycle (2024–2027) TC4.4 addresses the new cross-cutting topic of sustainability by focusing on the operation and maintenance of road tunnels. New aspects regarding reduction of energy consumption and use of renewable energy sources for tunnel operation are the focus of this work. Operating and ensuring the safety of users is a major challenge for owners and operators of road tunnels. The new topic of digitalization of Road Tunnel Design and Management addresses digital approaches which could help operators in their tasks related to safe and efficient infrastructure operation and management. Further work of TC 4.4 focuses on active modes of transport (pedestrians, cyclists) in road tunnels which are increasing in many cities but also on rural roads. The very fast developments in the area of vehicles powered by New Energy Carriers (NEC) like electric vehicles, hydrogen, etc. will be further investigated based on the successful work already done in the 2020–2023 work cycle.

More information can be accessed at: <https://www.piarc.org/en>

2024–2027 Issues:

- 4.4.1 Sustainability of tunnel operation: new approaches
- 4.4.2 Impact of the development of active modes of transport (walking, cycling, wheelchairs) in road tunnels
- 4.4.3 Digitization of road tunnel design and management
- 4.4.4 Tunnel operation and safety issues related to the usage of new energy carriers (NEC) in road vehicles
- 4.4.5 Update of the Road Tunnel Manual
- 4.4.6 Preparation of the 3rd International Conference on Road Tunnel Operation and Safety
- 4.4.7 Dissemination and possible update of DG-QRAM

OBJECTIVES OF THE SEMINAR

The objectives of the International Seminar on Tunnels are:

- a. Knowledge Exchange: Facilitate dialogue among international experts to share insights and successful strategies in tunnel engineering, tunnel safety, tunnel operation and maintenance.
- b. Best Practices Dissemination: Identify and share best practices tailored to the diverse contexts of participant countries.
- c. Innovative Solutions: Explore and propose innovative solutions to contemporary challenges in tunnel technology.
- d. Network Building: Foster a network of stakeholders to enhance collaboration and partnerships in road tunnel initiatives.
- e. Sustainability Focus: Promote discussions on sustainable practices like green and low-carbon solutions for tunnel construction, operation and management.
- f. Resilience Focus: Promote discussions on hazards to road tunnels and about effective measures which could strengthen the resilience of tunnel assets and tunnel operators.
- g. Recommendations and standardization: Formulate recommendations for future standardizations in the field of tunnels.
- h. Future Readiness: Prepare the tunnel sector for future challenges in tunnel construction, operation and maintenance.

ORGANIZING COMMITTEE

No.	Name	Position/Organization
<i>People's Republic of China</i>		
1	Rongfeng ZHOU	Director of Highway Bureau of the Ministry of Transport First Delegate of PIARC in China
2	Huiyu ZHANG	Research Officer of Highway Bureau of the Ministry of Transport
3	Ji ZHAO	Highway Bureau of the Ministry of Transport
4	Si LIU	Highway Bureau of the Ministry of Transport
5	Hao DING	Head of National Engineering Research Center of Road Tunnel, CMCT
6	Jianxun CHEN	Vice President, Chang'an University
7	Yao RONG	General Manager, Jiangxi Transportation Institute Co., Ltd.
8	Jun HUANG	Head of Jiangsu Province Underwater Tunnel Green Intelligent Technology Engineering Research Center, JSTI GROUP
<i>Technical Committee 4.4</i>		
9	Ingo KAUNDINYA	Chair
10	Hélène MONGEOT	French-speaking Secretary
11	Tiago MASSINGUE	English-speaking Secretary
12	Rafael LOPEZ GUARGA	Spanish-speaking Secretary
13	Bijan KHALEGHI	Member
<i>PIARC General Secretary</i>		
14	Miguel CASO FLOREZ	Technical Director
15	Rahul GUPTA	Technical Advisor
<i>ITA</i>		
16	Arnold DIX	President
17	Eric PREMAT	Chairman ITA Committee on Operational Tunnel Safety

INTERNATIONAL SEMINAR

Tunnel Tech: Leading The Way Forward

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ABOUT THE SEMINAR



DATE:

21-23 May, 2025



LOCATION:

Chongqing, China

Chongqing

Chongqing, the "Mountain City", a centrally-administered municipality in Southwest China, is renowned for its historical significance and cultural heritage. Once the wartime capital from 1937 to 1946, it now stands as a major financial, technological, and industrial center. Chongqing is home to the world's largest electronics and information industry cluster and China's leading automotive industry. Its cuisine, especially hot pot, is famous for its spiciness, earning it the title "Chinese Hot Pot Capital." Strategically, the city is a key player in the Belt and Road Initiative, an essential inland open area, and a pivotal transportation hub with the Port of Chongqing and Chongqing Jiangbei International Airport.

WEATHER

Weather in May is warm and humid. Temperatures range from 19°C to 27°C (66°F to 81°F). Rainfall may happen, making the city lush and green. Flowers in full bloom in parks and garden. Visitors could pack light clothing and a light jacket for the evenings.

ACCOMMODATION

Hotels	Distance from Venue	Price Range (€)
Chinese Entrepreneur International Conference Center	4.2km	45-90
Conrad Hotels & Resorts Chongqing (Hilton Premium Brand)	1.3km	131-157
Le Meridien Chongqing Nan'an Hotel	3.1km	118-131
JW Marriott Hotel Chongqing	4.7km	105-131
Sheraton Chongqing Hotel	3.9km	85-98
Radisson Blu Plaza Chongqing Hotel	2.1km	76-83
Double Tree by Hilton Chongqing Jiafa Hotel	1.4km	66-79
Wanda Amber Hotel Chongqing	3.6km	59-63
Palace Hotels	3.5km	52
Chongqing Nanbin Road Wanda Encore Hotel	3.6km	46-50
Yishang PLUS Hotel (Chongqing Technology and Business University)	3.5km	39-42
Chongqing Hoi Tak Hotel	4.8km	34-37
Chongqing Xuehao Hotel	4.5km	34-42

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02 // AGENDA

Seminar Day 1: Wednesday, 21 May, 2025

08:00–09:00	Registration
09:00–10:00	Opening Ceremony
10:00–11:00	Keynote Lectures
10:45–11:30	Coffee & Tea Break / Opening of Exhibition
11:30–12:30	Panel Discussion on Sustainable Tunnels (tbd)
12:30–14:00	Lunch Break / Visit of Exhibition
	Parallel Sessions with a Coffee & Tea Break between 15:30–16:00
14:00–17:30	Session A: Green and Low-Carbon Including new materials, new energy, green industrial construction, active modes of transport, etc. Session B: Submerged Floating Tunnel (SFT) Including the design and construction technology of SFT, etc. Session C: International Standardization Exchange and share information on the compilation and application of standards in China and other countries, Technical reports on Case Studies
18:30–21:00	Dinner

Seminar Day 2: Thursday, 22 May, 2025

(Parallel Sessions with a Coffee & Tea Break between 10:30–11:00)

09:00–12:30	Session A: Mechanized Tunnel Construction Including mechanized construction methods, technologies, equipment, management systems, etc. Session B: Drill and Blast Tunnel Construction Including drilling and blasting construction methods, equipment, applications, etc. Session C: New Technology of Tunnel Intelligence Intelligent technology applications include unmanned patrols, health monitoring, big data management, etc. Session D: Tunnel Operation Safety Control Including improvement of tunnel electromechanical facilities, fire emergency escape measures, safety risk assessment, safety risk management system, etc. Session E: Tunnel Maintenance Including preventive maintenance technology, daily inspection, maintenance management system, maintenance disease treatment, etc. Session F: Improved Tunnel Resilience Including tunnel resilience assessment methods, resilience improvement measures, etc.
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12:30-14:00	Lunch Break / Visit of Exhibition
14:00-16:00	<p>Session A: Mechanized Tunnel Construction Including mechanized construction methods, technologies, equipment, management systems, etc.</p> <p>Session B: Drill and Blast Tunnel Construction Including drilling and blasting construction methods, equipment, applications, etc.</p> <p>Session C: New Technology of Tunnel Intelligence Intelligent technology applications include unmanned patrols, health monitoring, big data management, etc.</p> <p>Session D: Tunnel Operation Safety Control Including improvement of tunnel electromechanical facilities, fire emergency escape measures, safety risk assessment, safety risk management system, etc.</p> <p>Session E: Tunnel Maintenance Including preventive maintenance technology, daily inspection, maintenance management system, maintenance disease treatment, etc.</p> <p>Session F: Improved Tunnel Resilience Including tunnel resilience assessment methods, resilience improvement measures, etc.</p> <p>Youth Forum Students from colleges and universities at home and abroad give academic reports</p>
16:00-16:30	Coffee & Tea Break / Visit of Exhibition
16:30-17:30	Closing Session
18:30-21:00	Dinner

Seminar Day 3: Friday, 23 May, 2025

09:00	<p>Technical Site Visits (You can choose one or both)</p> <p>Option1: Zengjiayan Bridge Tunnel & CMCT Test Platforms</p> <p>Option2: Yanglushan Tunnel</p>
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TECHNICAL VISITS

Option1



Zengjiayan Bridge Tunnel

- ※ Located in vital urban area, heavy traffic load
- ※ Fully interconnected subterranean interchange tunnel
- ※ Implemented intelligent and digital operational management
- ※ Incorporated numerous advanced operational technologies

CMCT Test Platforms

- ※ A series of tunnel emergency response intelligent equipments
- ※ Multi-functional intelligent cleaning robot for road tunnels
- ※ Flexible blocking traffic control system for road tunnel entrance
- ※ The Highway Tunnel Operation Safety Monitoring (Inspection) Robot
- ※ Construction safety portable intelligent warning system, etc.

Option2



Yanglushan Tunnel

- ※ Chongqing's first intelligent management and control platform for highway tunnels
- ※ Real-time monitoring of tunnel operation
- ※ Intelligent control of tunnel lighting
- ※ Rapid response to emergencies and 211% improvement in disposal efficiency



03 // REGISTRATION

REGISTRATION

Registration Type	Early Bird Price (EUR)	Standard Price (EUR)	On-Site Price (EUR)
	Before 28 th Feb, 2025	1 st March-20 th May, 2025	After 20 th May, 2025
Non-Member	495	520	550
PIARC Member	440	480	495
Student (under 35)	275	345	385
Paper Author	275	275	275

	Norms	Unit / Quantity	Cost (EUR)
Booth Rental	Exhibition Booth	Booth	4,100
	Exhibition Space	m ²	350
Sponsorship	Diamond	1	34,250
	Platinum	3	20,550
	Gold	5	13,000
	Silver	8	8,900
	Bronze	10	6,200

Technical Visits	Option2: Yanglushan Tunnel	€45
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Details of Registration Entitlements

The Registration Fee Includes:

- ※Conference Materials
- ※Opening Ceremony
- ※Keynote Lectures
- ※Technical Sessions
- ※Lunch and Coffee
- ※Welcome Reception
- ※Exhibition Area Visit

Description of Sponsorship Benefits

Sponsorship Benefits	Diamond	Platinum	Gold	Silver	Bronze
Company Logo and Name Displayed on the Conference Website and Agenda	1	1	1	1	1
Exhibition Raw Space (≥36m ²)	100	54	36	/	/
Exhibition Standard Booth (3x3m, 9m ² per booth)	/	/	/	2	1
Complimentary Full Registration	15	8	5	2	2
Advertisement on Official Website, WeChat Official Account and Video Channel	1	/	/	/	/
Lanyards and Badges (Exclusive)	Select one from two options	/	/	/	/
Conference Bag with Logo (Exclusive)		/	/	/	/
Conference Bottled Water with Logo (Exclusive)	/	Select one from five options	/	/	/
Conference USB with Logo (Exclusive)	/		/	/	/
Conference Pen with Logo (Exclusive)	/		/	/	/
Conference Notepads with Logo (Exclusive)	/		/	/	/
Full-Page Back Cover of Conference Notepads (Exclusive)	/		/	/	/
Giveaways in Conference Bag (Provided by Sponsor)	1	1	/	/	/
Company Leaflets in Conference Bag (Provided by Sponsor)	1	1	/	/	/
Full-Page Advertisement in Brochure	1	1	1	1	1
Conference Entrance Flag with Logo(Single-Sided)	1	1	1	1	1
Company Logo Displayed on the Meeting Room Screen During Breaks	1	1	1	1	1
Company Display Broad at the Conference Entrance (Logo)	1	1	1	1	1
Total	€34,250	€20,550	€13,000	€8,900	€6,200

PRE-REGISTRATION FORM

Name		Telephone	
E-mail		Gender	
Company		Title/Position	
Address			
Participation Type	<input type="checkbox"/> Non-Member <input type="checkbox"/> PIARC Member <input type="checkbox"/> Student (under 35) <input type="checkbox"/> Paper Author <input type="checkbox"/> TC4.4 Member	Technical Visits	<input type="checkbox"/> Option1: Zengjiayan Bridge Tunnel CMCT Test Platforms <input type="checkbox"/> Option2: Yanglushan Tunnel (You can choose one or both)

Please return completed form to:

E-mail: yqli@meet-us.cn

Mobile Phone: +86 139 0228 7097