

CTIL DEVELOPMENT PROGRAMME ON

ADVANCED MANUFACTURING AND ASSEMBLY OF COMPLEX STEEL STRUCTURES

SHENZHEN & CHONGQING, CHINA
12 – 18 APRIL 2026



ORGANISED BY:

SUPPORTED BY:



PROGRAMME OVERVIEW

The Singapore Institute of Technology's (SIT) Construction Technology Innovation Laboratory (CTIL), with support from the Building and Construction Authority (BCA) and the Land Transport Authority (LTA) of Singapore, is organizing a focused seven-day professional learning expedition to Shenzhen and Chongqing, China, from 12 to 18 April 2026.

This executive-level programme is led by Er. Clement TSENG, Deputy CEO of BCA, Er. Prof. CHIEW Sing-Ping, SIT and Er. NG Choon-Yeang, Group Director of LTA, collectively providing strong institutional leadership across academia, government agencies and the BE industry.

The programme focuses on building partnership, knowledge transfer, and technological assessment in advanced manufacturing and assembly of complex steel structures, combining technical presentations and seminars, expert dialogues, and structured visits to iconic steel projects under construction. Participants will gain first-hand exposure in advanced steel manufacturing, automated fabrication, smart construction systems, and AI-enabled monitoring for QA/QC.

Designed for decision makers and industry leaders, the expedition will also offer strategic insights into the governance, industrialization, and translational research ecosystem shaping the design and delivery of complex steel construction in this new AI-enabled era.

KEY THEMES



Design, Construction and Regulatory Frameworks in landmark developments



End-to-End Delivery of Complex Steel Structures – From Automated Fabrication to On-Site Erection



Upstream Digital Steel Production and Supply Chain Integration



Research Translation in smart and sustainable construction and standard development

LEADERS & EXPERTS



Er. Clement TSENG
Deputy CEO
(Building Control),
Building and Construction Authority,
Singapore



Er. Prof. CHIEW Sing Ping
Head of CTIL
Cluster Director (Engineering)
Singapore Institute of Technology,
Singapore



Er. NG Choon Yeang
Group Director
(Cross Island Line),
Land Transport Authority,
Singapore



Prof. ZHOU Xuhong
Academician of
Chinese Academy of
Engineering,
Chongqing University,
China



Prof. Yukio TAMURA
Academician of
Chinese Academy of
Engineering,
Chongqing University,
China

HOST PARTNERS IN CHINA



重慶大學
CHONGQING UNIVERSITY



中建鋼構股份有限公司
CHINA CONSTRUCTION STEEL STRUCTURE CORP., LTD

LEARNING JOURNEY TO STUDY COMPLEX STEEL STRUCTURES



Shenzhen Bay Super Headquarters Base – Tower C exemplifies advanced complex steel engineering in a dense urban environment. The project incorporates multi-level transfer structures, large-span systems, and cantilevered elements, demonstrating integrated design-to-fabrication workflows and coordinated on-site erection strategies.



The Shenzhen Opera House is a landmark project characterized by sweeping, irregular, and curved steel geometries. The project illustrates how complex geometries are translated into buildable and compliant structural systems, offering insights into engineering integration and delivery of architecturally ambitious steel structures.



CSCEC Intelligent Construction Research Institute for Steel Structures demonstrates how upstream automation, precision manufacturing, and digital integration enhance productivity, quality, and traceability in complex steel structures.

EMBRACING ADVANCED MANUFACTURING AND ASSEMBLY OF COMPLEX STEEL STRUCTURES



Huang Jue Tuo Bridge is the world's longest double-deck suspension bridge, carrying road traffic on the upper deck and rail transit below. The project demonstrates the deployment of drones and AI-enabled monitoring systems to manage construction-stage stability, alongside innovative steel reuse strategies in temporary works.



Chongqing Iron and Steel Co., Ltd is a major producer of hot-rolled and cold-formed steel plates for bridge and high-rise applications. The visit offers close-up exposure to the production chain—from iron and steelmaking furnaces to hot-rolling mills, heat-treatment lines, and cold-forming facilities.



The **Research Center for Steel Structure Engineering (RCSSE)** at Chongqing University is a leading institute in advanced steel structural engineering. The visit includes a technical seminar on research translation in smart construction, sustainability, and energy structures, as well as a tour of large-scale testing facilities for long-span space structures, bridges, and wind power systems.

PROGRAMME OUTLINE

DATE	PROGRAMME HIGHLIGHTS	LOCATION
Day 0 Sun, 12 Apr	Arrival in Shenzhen, CHINA	
Day 1 Mon, 13 Apr	<ul style="list-style-type: none"> • Visits: <ol style="list-style-type: none"> 1. China Steel Structure Museum 2. CSCEC Steel Intelligent Manufacturing R&D Institute 3. Technical presentations by CSCEC • Dialogue with Housing and Construction Bureau of Shenzhen Municipality • Welcome Dinner 	Shenzhen, China
Day 2 Tue, 14 Apr	<ul style="list-style-type: none"> • Visits: <ol style="list-style-type: none"> 1. China Construction Steel Structure Guangdong Co. Ltd. 2. The Shenzhen Bay Super Headquarters Tower C Project 3. The Shenzhen Opera House Project 	Shenzhen, China
Day 3 Wed, 15 Apr	<ul style="list-style-type: none"> • Morning Travel from Shenzhen to Chongqing 	Shenzhen to Chongqing, China
	<ul style="list-style-type: none"> • Dialogue with Chongqing Municipal Commission of Housing and Urban-Rural Development • Welcome Dinner 	Chongqing, China
Day 4 Thu, 16 Apr	<ul style="list-style-type: none"> • Technical Seminar <ol style="list-style-type: none"> 1. Prof. Chiew Sing Ping, Singapore Institute of Technology 2. Academician Prof. Zhou Xuhong, Chongqing University 3. Academician Prof. Yukio Tamura, Chongqing University • Visits: <ol style="list-style-type: none"> 1. Research Centre for Steel Structure Engineering, Chongqing University 	Chongqing, China
Day 5 Fri, 17 Apr	<ul style="list-style-type: none"> • Visits: <ol style="list-style-type: none"> 1. Huang Jue Tuo Bridge 2. Chong Guang Sports Centre 3. Metallurgical Corporation of China Limited (MCC) – Steel Structure Fabrication Plant 	Chongqing, China
Day 6 Sat, 18 Apr	<ul style="list-style-type: none"> • Visit: <ol style="list-style-type: none"> 1. Steel Mill: Chongqing Iron and Steel Co., Ltd 	Chongqing, China
	<ul style="list-style-type: none"> • End of Programme • Departure from Chongqing to Singapore 	

ADMINISTRATIVE DETAILS

- **PROGRAMME DURATION:**

12 to 18 April 2026 (Incl. travelling)

- **PROGRAMME FEE:**

SGD3,950* (Excluding GST)

**Fee includes accommodation, welcome dinners, working lunches, technical seminar, and local ground transportation services throughout the programme. It does not include airfare, travel insurance, or additional meal expenses.*

Seats are limited, please register early.

- **FLIGHTS**

- Participants are encouraged to book air tickets based on the recommended flight arrangements (Singapore → Shenzhen, Shenzhen → Chongqing, Chongqing → Singapore).
- Local ground transportation to and from the airports will be provided for participants travelling on the recommended flights.

- **PAYMENT**

Payment instructions will be provided upon confirmation of registration.

- **ENQUIRIES**

You may contact SIT CTIL (CTIL@singaporetech.edu.sg) should you have any queries.

** Participants will be notified via email with further details on payment and programme arrangements.*

EXPRESSION OF INTEREST*

Please scan the QR code

