



40th Anniversary of Shenzhen University Academic Forum Series

ACF2023_ETSL

THE 4th ASIAN CONCRETE FEDERATION SYMPOSIUM ON EMERGING TECHNOLOGIES FOR STRUCTURAL LONGEVITY

— New technology for long-life structure —

March 11-13, 2023 Shenzhen, China

Organizer :



Co-Organizers :



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Supporting Organizations:

中国土木工程学会
CHINA CIVIL ENGINEERING SOCIETY



대한민국 콘크리트학회
Korea Concrete Institute





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Dear professors and friends,

Good afternoon! Just now, we have successfully completed all the agenda of the 4th Asian Concrete Federation Symposium. The two-day conference was productive and effective and we are honored to gather with you in Shenzhen to discuss academic questions, exchange experiences, and deepen our friendship.





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More than 250 experts and students from more than 10 countries participated in the conference. A total of 14 sessions and 180 presentations were presented in the conference.





40th ANNIVERSARY OF SHENZHEN UNIVERSITY

深圳大学40周年校庆



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Jian-Guo NIE

Tsinghua University,

Director of Civil, Hydraulic and Architecture Engineering Division, Chinese Academy of Engineering

Welcome Speech



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Hui ZHOU

Vice President of Shenzhen University

Welcome Speech



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Cai-Jun SHI

Hunan University, President of Asian Concrete Federation

Introduction of Asian Concrete Federation



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Prof. Jin-Ping OU

*Academician of Chinese Academy of Engineering
Harbin Institute of Technology (Shenzhen), China*

Topic: Self-sensing FRP Products, Seawater Sea-sand /Nano Concrete and Corrosionfree Smart Structures



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Prof. Chang-Wen MIAO

*Academician of Chinese Academy of Engineering
Southeast University, China*

Topic: Green and Low-Carbon Construction Materials



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Prof. Jie LI

*Academician of Chinese Academy of Sciences
Tongji University, China*

Topic: Stochastic Damage Mechanics: Developments and Recent Progress



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Prof. Shi-Lang XU

*Academician of Chinese Academy of Sciences
Zhejiang University, China*

**Topic: Ultra-high Toughness Cementitious Composites (UHTCC) for Resilient
and Sustainable Infrastructures**



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Prof. Feng XING

Shenzhen University, China

Topic: Self-healing Materials and Technology for Marine Concrete



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Dr. Akio Kasuga

Immediate Past President of fib, Executive Vice President, CTO, Sumitomo Mitsui Construction, Japan

Topic: Evolution of fib Model Code 2020



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Prof. Hong-Gun PARK

President of Korea Concrete Institute, Korea

Topic: Performance-Based Earthquake Design of Building Structure in Korea



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Prof. Sylvia Keßler

Helmut Schmidt University, Germany

Topic: Reliability assessment of NDT in Civil Engineering



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Prof. Zong-Jin LI

*Institute of Applied Physics and Materials Engineering
Macau University of Science and Technology, China*

Topic: Concrete durability and the corresponding test methods



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Prof. Jin-Guang TENG

Academician of Chinese Academy of Sciences

The Hong Kong Polytechnic University, Hong Kong, China

Topic: FRP-seawater sea-sand concrete structures: origin, current status and some latest innovations



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This symposium was held simultaneously in 14 sub-forums, which fully explored new technologies, achievements and ideas in the field of concrete. The participating experts and representatives had in-depth exchanges and discussions on various issues in the field of concrete today, shared their respective experiences and achievements, and made important contributions to the development of the concrete field.





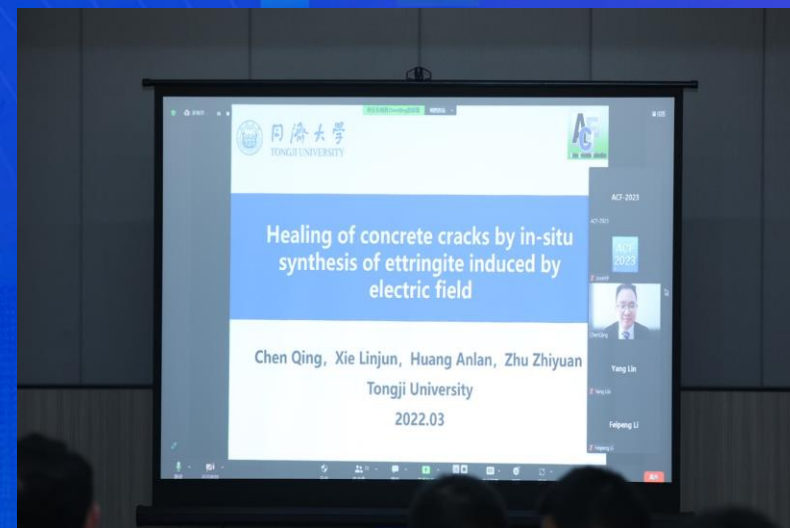
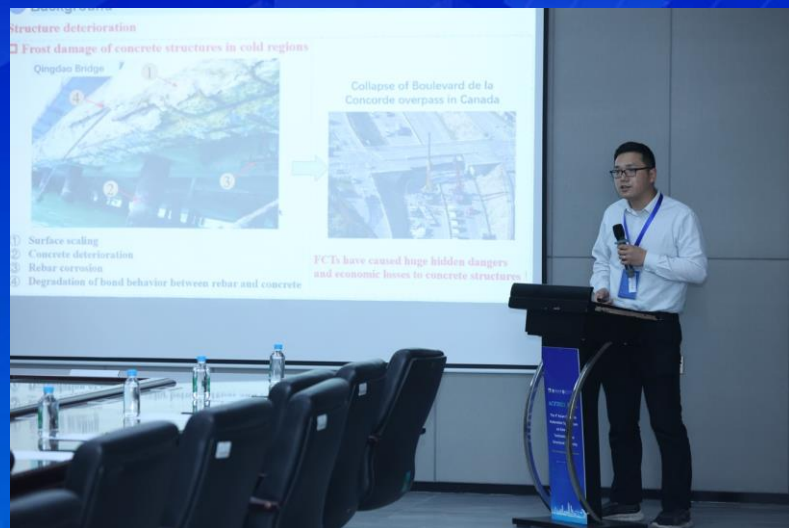
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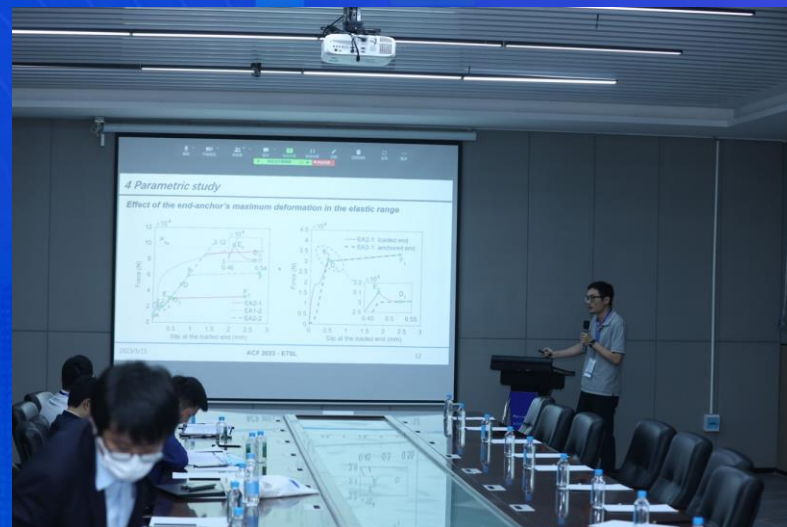
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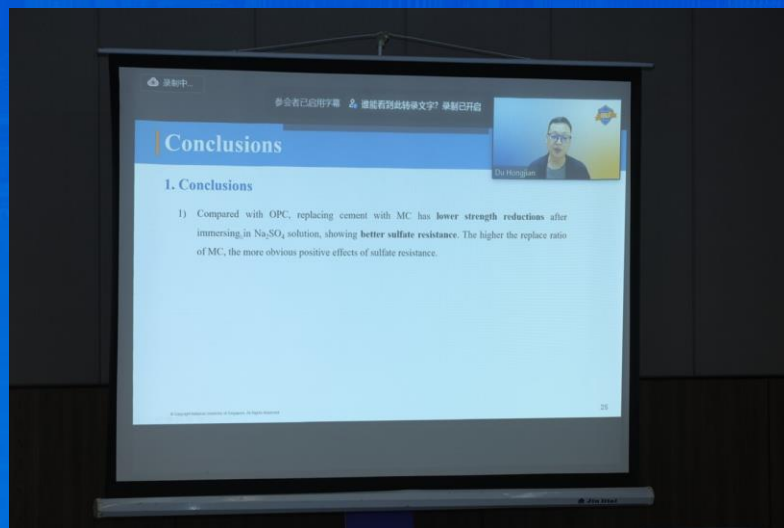
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Here, I would like to express my heartfelt thanks to all the experts and representatives who participated in this symposium! Thank you for your efforts and contributions to this symposium. We hope we can continue to stay connected and cooperate to jointly promote the innovation and development of concrete research in the coming days .





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fib MC2020 Workshop



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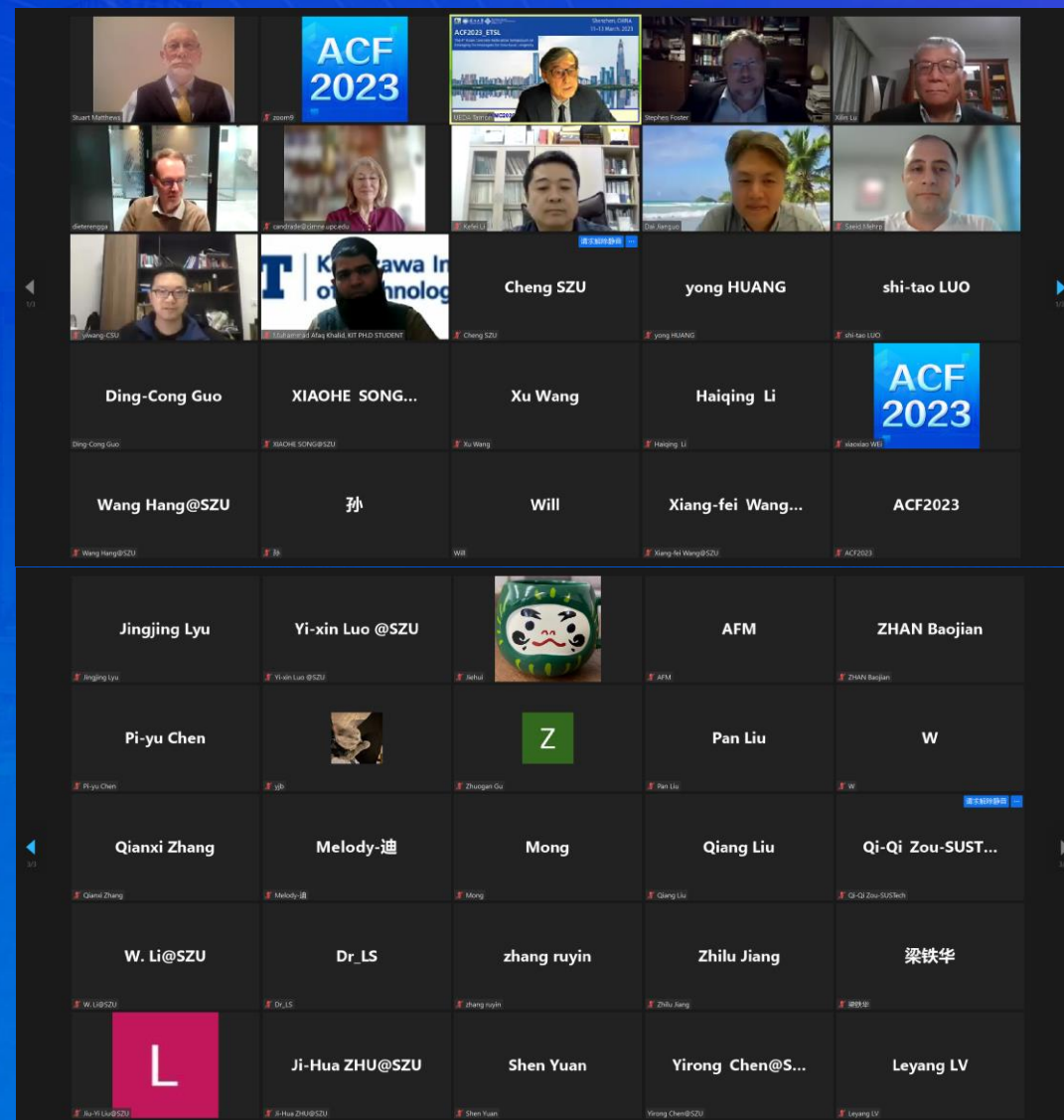
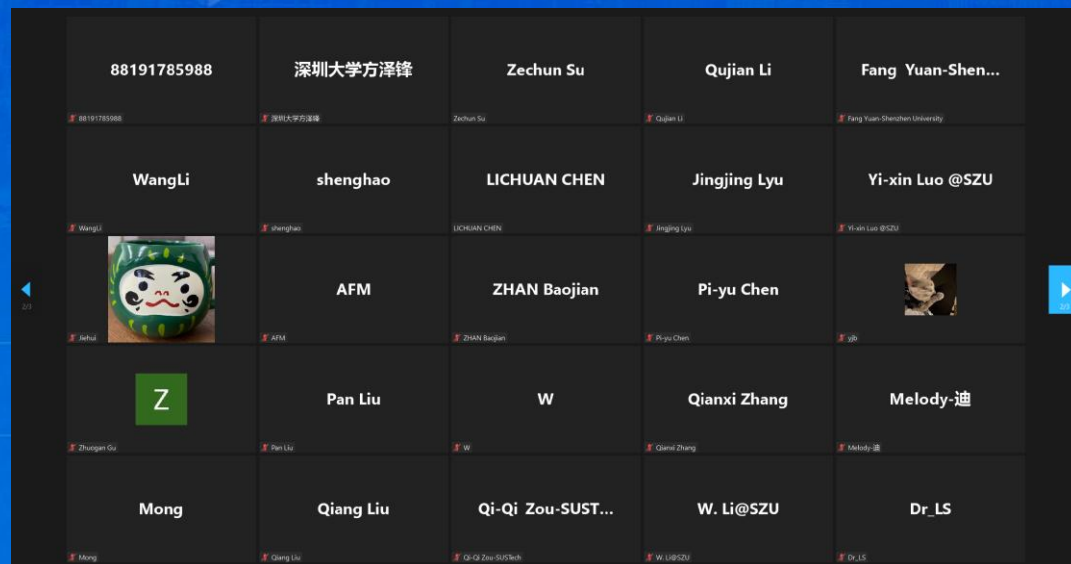


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The *fib* MC2020 Workshop attracted more than one hundred scholars from all over the world. We invited seven experts from Japan, Spain, Netherland, Britain, and China to give online lectures.





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你正在观看 Stuart Matthews 的屏幕 概览

fib MC2020 Workshop – Online: 13 March 2023: Zoom ID: 881 9178 5988, Password: ACF2023

London Time (GMT)	Europe Time (CET)	Australian Time (AEDT)	China - Shenzhen Time	Presentations (30 + 5 Q&A = 35 total) / Activities	Presenter / Persons
7:00	8:00	18:00	15:00	Registration / Sign-in	
7:30	8:30	18:30	15:30	Welcome / Opening remarks	Prof Stephen FOSTER, <i>fib President, Lausanne</i>
				Session A: <i>fib MC2020 topics</i>	Session A Chair - Dr Stuart MATTHEWS
7:40	8:40	18:40	15:40	A1: Introduction + overview of MC2020, Sustainability and Life Cycle Management	Dr Stuart MATTHEWS, <i>fib TG10.1: MC2020</i>
8:15	9:15	19:15	16:15	A2: Durability and Service Life Design	Prof Carmen ANDRADE, <i>CIMNE, Barcelona</i>
8:50	9:50	19:50	16:50	A3: Assessment of existing structures	Gerrie DIETEREN, <i>TNO, Delft</i>
9:25	10:25	20:25	17:25	Questions & Answers	Session A speakers
9:40	10:40	20:40	17:40	Short break	
				Session B: Chinese Perspectives	Session B Chair - Prof Tamon UEDA
10:00	11:00	21:00	18:00	B1: Seismic design of structures in China	Prof Xi-Lin LV, <i>Tongji University</i>
10:35	11:35	21:35	18:35	B2: Durability design of structures in China	Prof Ke-Fei LI, <i>Tsinghua University</i>
11:10	12:10	22:10	19:10	B3: Conservation and Interventions – A comparison of <i>fib</i> and Chinese perspectives	Prof Tamon UEDA, <i>Shenzhen University</i>
11:45	12:45	22:45	19:45	Questions & Answers	Session B speakers
12:00	13:00	23:00	20:00	Closing remarks - Round-up of Workshop	Prof Xi-Lin LV, <i>Tongji University</i>
12:10	13:10	23:10	20:10	End	

Stuart Matthews

静音 开启视频 安全 参会者 64 聊天 共享屏幕 暂停/停止录制 显示字幕 回应 应用 更多 结束

Stuart MATTHEWS

Federation for Structural Concrete(fib)

Introduction+overview of MC2020



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Ways to achieving a low carbon building industry

Dematerialisation: Higher strength, higher performance materials; efficiency gains.

Substitution: Replacement of a higher carbon material with a lower one that gives the same or improved performance.

Capture: Carbon, capture storage, reuse



UNSW

视频会议 开始/结束 安全 参会者 聊天 屏幕共享 暂停/停止屏幕 显示字幕 回放 应用 更多

Prof. Stephen FOSTER

President of the International Federation for Structural Concrete (fib)

Welcome/Opening remarks



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fib
CEB • FIP

Adaptation of existing assets in Cape Town – previous grain silos in the port area:
A profound & stunning transformation of these redundant facilities

Zeitz Museum of Contemporary Art Africa (MOCAA), Cape Town

The 5-star ★★★★★ SILO Hotel

“Chic venue for viewing modern art works” - Google
The Zeitz MOCAA - stunning adaptation

“Swanky hotel in converted grain silo” - Google
The SILO Hotel
5 star ★★★★★

Lower concrete part was previous grain silos

So those parts for the previous grain, silos, and one part has been converted into the Zeitz Museum for contemporary art Africa, known as the Mocka, and the other one is been converted into the aptly name signo hotel which is

Photo Wikipedia Commons: By Axxter99 - Own work, CC BY-SA 4.0

Stuart MATTHEWS

Federation for Structural Concrete(fib)

Sustainability and Life Cycle Management



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The screenshot shows a Zoom meeting window. At the top, there's a header for 'ACF2023_ETSL' with logos for Shenzhen University and The Hong Kong Polytechnic University. The main content area displays a presentation slide titled 'DURABILITY AND SERVICE LIFE DESIGN'. The slide lists two speakers: Carmen Andrade Perdriz, Visiting Research Prof. at CIMNE in Madrid, Spain, and Lionel Linger, from VINCI Construction Grands Projets in Nanterre, France. The date '13 March 2023' is at the bottom of the slide. On the right side of the Zoom window, there is a small video feed of a woman, identified as 'all.candrade@cimne.upc.edu', who is speaking. The Zoom interface includes standard controls at the bottom like mute, video, and chat.

Prof. Carmen ANDRADE

Instituto Eduardo Torroja, Spain

Durability and Service Life Design



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The screenshot shows a video conference interface. On the left, a presentation slide for 'fib MC2020: Assessment of existing structures' is displayed. The slide includes the text 'ACF2023 ETSL - Shenzhen CHINA - 11 -13 March 2023', the presenter's name 'Dieteren, G.G.A. (Gerrie)', and the date '13 March 2023'. On the right, a video feed shows Dr. Gerrie Dieteren, a man with glasses wearing a brown sweater. The background of the video feed is a large concrete bridge over a river. The TNO logo is visible in the bottom right corner of the video feed. At the bottom of the screen, there is a toolbar with various icons for video control and chat.

Dr. Gerrie DIETEREN

Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoekseung, Netherland

Assessment of existing structures



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3. Design of steel-concrete composite structures



- The design codes related to composite structures in China:
 - GB 55004-2021, General Code for Composite Structures
 - JGJ 138-2016, Code for Design of Composite Structures
 - JGJ 3-2010, Technical Specification for Concrete Structures of Tall Buildings, Chapter 11
- Steel-concrete composite structures:
 - Apply composite members in frame structure, frame-shear wall structure, frame-tube structure, etc.
 - Apply composite members alone, or combined with steel members or RC members.

Prof. Xi-Lin LV

Tongji University, China

Seismic design of structures in China



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Durability design of concrete structures in China : Standard and Practice
Lecture for fib MC2020 Workshop, March 13, 2023, Virtual Conference, ShenZhen, China



presented by **Prof. LI Kefei**
Civil Engineering Department
Tsinghua University, Beijing, China
E-mail: likefei@tsinghua.edu.cn
Tel/Fax: (86) 10 6278 1408

正在播放 Kefei LI 的视频

视频会议工具栏：静音、摄像头、聊天、共享屏幕、白板、应用、更多

Prof. Ke-Fei LI

Tsinghua University, China

Durability design of structures in China



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The screenshot shows a video conference interface. The main window displays a presentation slide with the title "Conservation and interventions-A comparison of *fib* and Chinese perspective" by UEDA Tamon, Distinguished Professor at Shenzhen University and Member of *fib* TG10.1 Model Code 2020. The slide also includes the *fib* logo and logos of Shenzhen University and The Hong Kong Polytechnic University. A smaller window on the right shows a video feed of Prof. Ueda. The bottom of the interface has a toolbar with various controls like mute, chat, and screen share.

Conservation and
interventions-A comparison
of *fib* and Chinese
perspective

UEDA Tamon
Distinguished Professor, Shenzhen University
Member, *fib* TG10.1 Model Code 2020

fib Model Code 2020 Workshop at ACF2023 Symposium, 13/03/2023, Online

Prof. Tamon UEDA

Shenzhen University, China

Conservation and interventions-A comparison of *fib* and Chinese perspectives



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Q+A section A



Q+A section B



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**Finally, thank you again for your presence and participation.
I wish you all more brilliant achievements in the future work!**

Thank you!