



World Conference on Floating Solutions

2024 Hong Kong

Conference Programme

The 4th World Conference on Floating Solutions (WCFS 2024)

2 to 4 December 2024, Hong Kong, China



Venue: Jockey Club Innovation Tower (Building V, PolyU)

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Conference Organization

International Scientific Committee

Chair: Prof. Chien-Ming WANG, Australia

Members: (in alphabetical order)

Mr. Per Arild ÅLAND, Norway	Prof. Hongbin LIU, Hong Kong, China
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Prof. Jianfei CHEN, China	Mr. Robert NEWMAN, UK
Dr. Rutger De GRAAF-VANDINTHER, The Netherlands	Prof. Dezhi NING, China
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Prof. Xiaoli DING, Hong Kong, China	Dr. William OTTO, The Netherlands
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Mr. Rick LAM, Hong Kong, China	Prof. Tomoaki UTSUNOMIYA, Japan
Mr. Soon Heng LIM, Singapore	Dr. Brydon WANG, Australia
Prof. Kenny LEUNG, Hong Kong, China	Prof. Kahing WONG, Hong Kong, China
Mr. Terence LEUNG, Hong Kong, China	Prof. Yufei WU, China
Prof. Ming LIN, China	Prof. Hong ZHANG, Australia
Dr. Yifeng LIN, China	Prof. Xiao-Lin ZHAO, Hong Kong, China
	Prof. Ronghua ZHU, China

Local Committee

Chair: Prof. Xiao-Lin ZHAO

Co-Chair: Prof. Jian-Guo DAI

Secretary: Dr. Siwei LIU

Members: (in alphabetical order)

Dr. Kaiming BI

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Prof. Yong XIA

Prof. Xiaoli DING

Mr. Haien XUE

Ms. Yize GAO

Dr. Rui YAN

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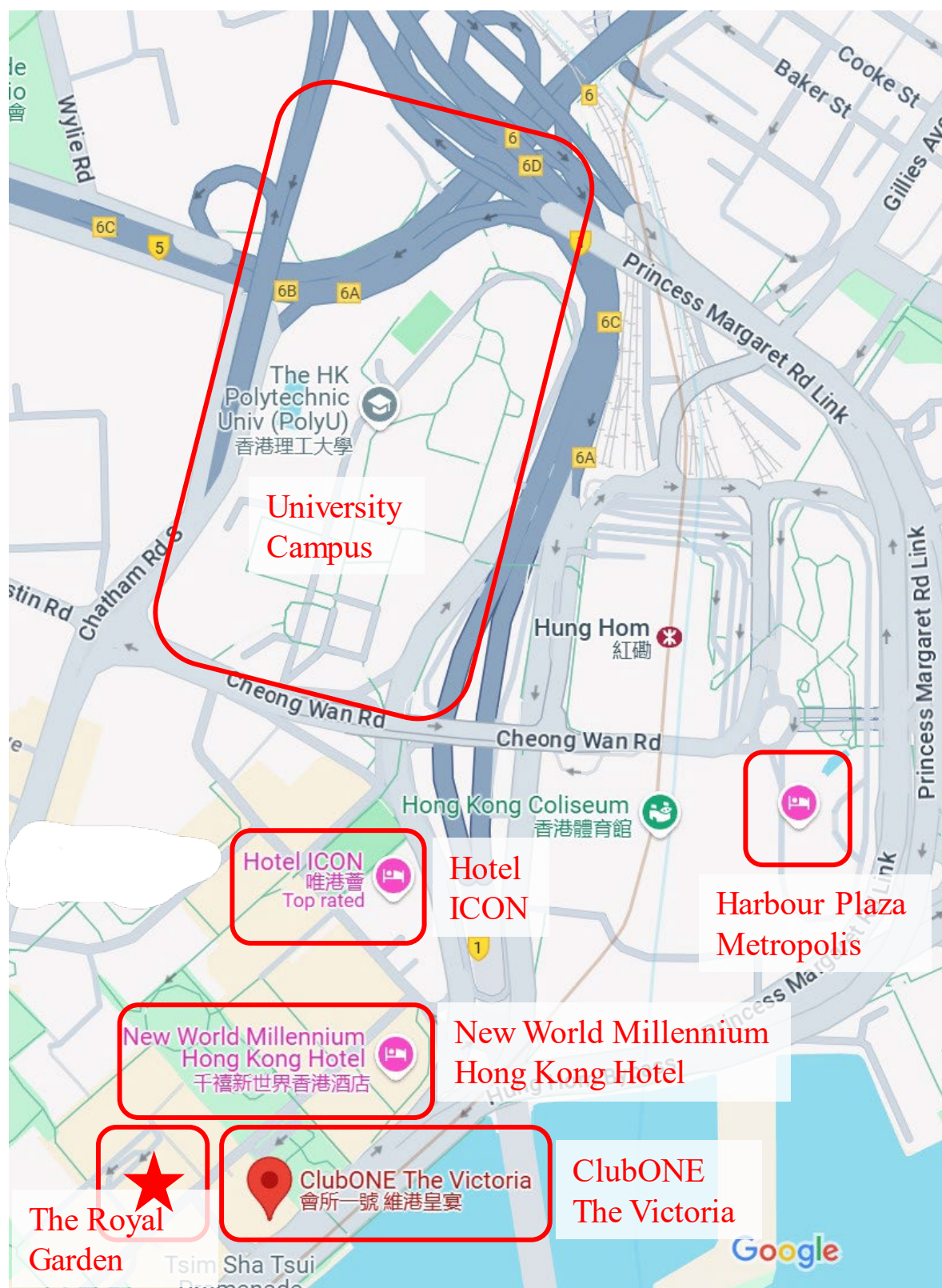


Structural Division
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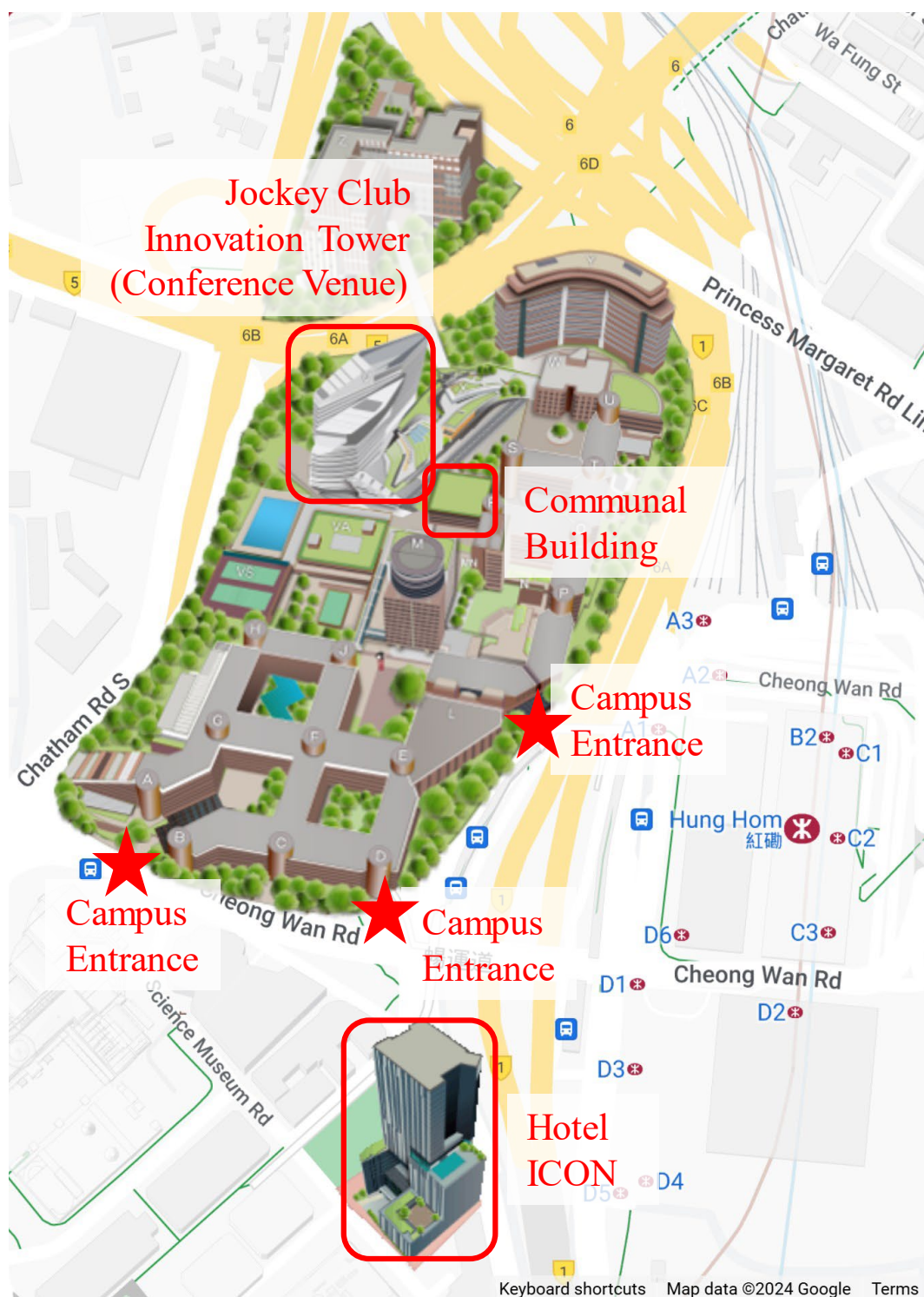
Sites around University Campus



For general information about Hong Kong, please visit:

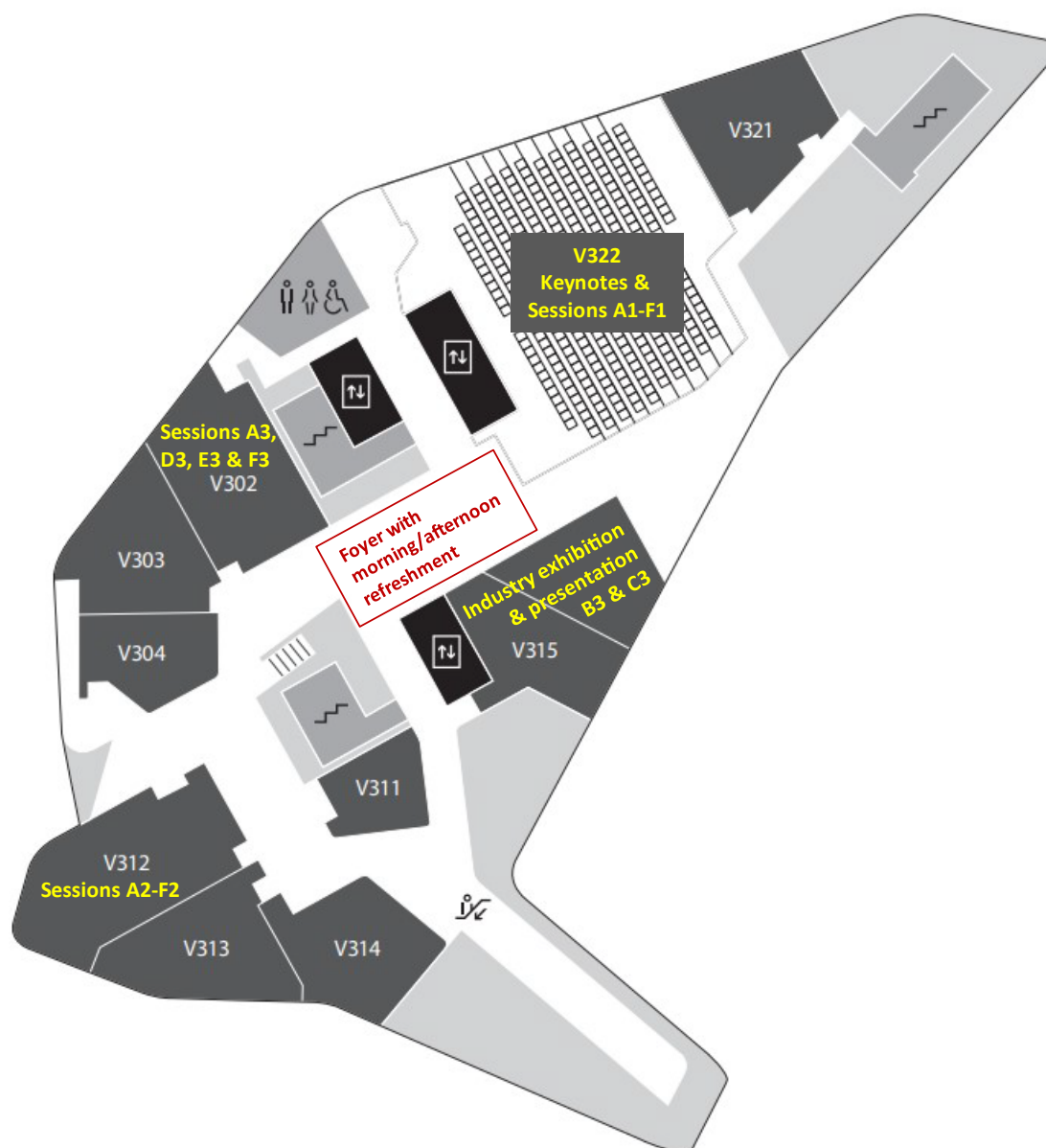
<https://events.polyu.edu.hk/WCFS2024/otherinformation>

Campus Map



If you have not received the QR code for entering university Campus, or the QR code does not work, please contact Dr. Siwei Liu: si-wei.liu@polyu.edu.hk and +852 5646 6192

Conference Venue



Level 3, Jockey Club Innovation Tower (Building V, PolyU)

Keynote Speakers



Prof. Torgeir MOAN is a professor emeritus of Marine Technology at the Norwegian University of Science and Technology (NTNU). Professor Moan's main disciplines are structural analysis and design, with a focus on stochastic dynamic analysis and safety assessment. He has carried out research as well as engineering design and analysis of innovative concepts of ships, oil and gas platforms, floating bridges and offshore wind turbines.



Prof. Chien-Ming WANG is a professor in Structural Engineering, The University of Queensland, Australia. He is a Fellow of the Australian Academy of Technology and Engineering, and a Fellow of Academy of Engineering Singapore. His current research focuses on the development of offshore aquaculture infrastructure.



Prof. Masashi KASHIWAGI is a professor emeritus of both Kyushu and Osaka Universities in Japan. His major topics in the research are the slender-ship theory and its application to seakeeping problems, wave-induced steady forces hydroelasticity problems in VLFS, multiple body-wave interactions, violent-flow problems using CFD techniques, unsteady wave-pattern analysis and its application to added resistance. He is an executive technical advisor of Hyundai Engineering & Construction, South Korea.



Ir. Jacky WU is the Head of Sustainable Lantau Office, Civil Engineering and Development Department, the Government of Hong Kong Special Administrative Region. He is a fellow of the Hong Kong Institution of Engineers.

Conference at a glance

1 December 2024 (Sunday)			
14:00 – 18:00	Registration (V312, PolyU)		
2 December 2024 (Monday)			
7:30 – 8:30	Registration (V312, PolyU)		
8:30 – 9:15	Opening Ceremony (V322, PolyU)		
9:15 – 10:15	Plenary Session for Keynote Speakers (V322, PolyU)		
10:15 – 10:30	Morning Refreshment (level 3 foyer area, building V, PolyU)		
10:30 – 12:15	Parallel Session A		
	Session A1 (V322) (Hydrodynamic Analysis)	Session A2 (V312) (Student Presentations)	Session A3 (V302) (Application and Prospect)
12:15 – 13:30	Lunch (Ju Yin House Seafood Restaurant, 4 th floor in Communal Building)		
13:30 – 15:00	Parallel Session B		
	Session B1 (V322) (Hydrodynamic Analysis)	Session B2 (V312) (Student Presentations)	Session B3 (V315) (Industry Presentations)
15:00 – 15:30	Afternoon Refreshment (level 3 foyer area, building V, PolyU)		
15:30 – 17:25	Parallel Session C		
	Session C1 (V322) (Materials for Floating Structures)	Session C2 (V312) (Student Presentations)	Session C3 (V315) (Industry Presentations)
17:30 – 20:00	Welcome Reception (PolyU Staff Club, 5 th floor in Communal Building)		
3 December 2024 (Tuesday)			
8:00 – 9:00	Registration (V312, PolyU)		
9:00 – 10:00	Plenary Session for Keynote Speakers (V322, PolyU)		
10:00 – 10:15	Morning Refreshment (level 3 foyer area, building V, PolyU)		
10:15 – 12:00	Parallel Session D		
	Session D1 (V322) (Policy, Social Acceptance and Legal Matters)	Session D2 (V312) (Hybrid Student and Regular Presentations: Materials and Hydrodynamics)	Session D3 (V302) (Modular Floating Structures)
12:00 – 13:30	Lunch (Ju Yin House Seafood Restaurant, 4 th floor in Communal Building)		
13:30 – 15:15	Parallel Session E		
	Session E1 (V322) (Wave Tank Tests)	Session E2 (V312) (Food, Energy, and Architecture)	Session E3 (V302) (Urban Planning)
15:15 – 15:45	Afternoon Refreshment (level 3 foyer area, building V, PolyU)		
15:45 – 17:30	Parallel Session F		
	Session F1 (V322) (Environmental Enhancement)	Session F2 (V312) (Construction and Design)	Session F3 (V302) (Floating Tunnel and Mooring System)
18:30 – 21:30	Conference Banquet (ClubONE The Victoria, Tsim Sha Tsui) Student Awards Presentation WCFS 2025 Presentation Closing Ceremony		
4 December 2024 (Wednesday)			
8:00 – 14:30	Technical Tours		

Opening Ceremony

8:30-9:15

Day 1 (V322)

Chair: Prof. Xiao-Lin ZHAO

Welcome speeches by:

- Prof. Jin-Guang TENG, President of PolyU
- Ir. Hon Ngai MA, Harry, JP, Deputy Director of CEDD
- Mr. Kin Ming LAI, Mickey, JP, Director of AFCD
- Dr. Stefan HUEBNER, President of the Society of Floating Solutions (Singapore)/SFSS
- Mr. Maurits TER KUILE, Consul General of the Netherlands to Hong Kong and Macau

Keynote Presentations

9:15-10:15

Day 1 (V322)

Chair: Prof. Xiaoli DING

9:15-9:45

Life Cycle Structural Integrity Management of Floating Structures
with a focus on floating bridges

Prof. Torgeir MOAN, The Norwegian University of Science and Technology, Norway

9:45-10:15

Opportunities and Potential Use of Floating Structures in Kau Yi Chau Artificial Islands Development

Mr. Jacky Wu, Head of Sustainable Lantau Office, CEDD, Hong Kong

9:00-10:00

Day 2 (V322)

Chair: Dr. Stefan HUEBNER

9:00-9:30

Advancements in Offshore Aquaculture: Enhancing Environmental Sustainability and Elevating Seafood Production

Prof. Chien-Ming Wang, The University of Queensland, Australia

9:30-10:00

Expandable Floating City with Modular Floating Structures and Related Hydrodynamic-elastic Analyses

Prof. Emeritus (Osaka University) Masashi KASHIWAGI, Hyundai Engineering & Construction, South Korea

Parallel Sessions (Day 1)

10:30-12:15	Day 1 Parallel Session A: Session A1 (V322) Hydrodynamic Analysis Chairs: Prof. Shixiao Fu and Prof. Tao Yu
10:30-10:45	Impact of Different Tendon Configurations on the Hydrodynamic Performance of a TLP Floating Offshore Wind Turbine <i>Zhe Tan and Ronghua Zhu</i>
10:45-11:00	Hydroelastic Responses of Submersible Cages under Extreme Waves <i>Mingyuan Ma, Hong Zhang, Xinyu Zhang, and Chien Ming Wang</i>
11:00-11:15	Hydroelastic Response of Large Floating Offshore Base for Offshore Wind Farm <i>Saika Iwamatsu, Mako Yamamoto, Ananda Raiz Pambela, and Kazuhiro Iijima</i>
11:15-11:30	A transient analysis of the tension leg platform for floating wind turbine <i>Wei Huang</i>
11:30-11:45	Dynamic Response Analysis of Pontoon-type Floating Bridges Subjected to Wave and Traffic Loads <i>Dongqi Jiang, Bo Wu, Bin Peng, and Yuhang Shao</i>
11:45-12:00	Development and Verification of a Simulation Tool for Floating Offshore Wind Turbines Using MBDyn <i>Tomoaki Utsunomiya, Ryoya Hisamatsu, Takayuki Morifuji, Kodai Uematsu, Riku Wakasa, Hisashi Okubo, Hayami Sato, and Takuya Kamijo</i>
12:00-12:15	Wave Attenuation Effect of Various Breakwater for Tropical Climate <i>Zhi Yung Tay and Nyan Lin Htoo</i>

10:30-12:15	Day 1 Parallel Session A: Session A2 (V312) Student Presentations Chairs: Prof. Nian-Zhong Chen and Prof. Quanke Su
10:30-10:45	Hydrodynamic Analysis of Novel Offshore Floating Concrete Modules and Mooring System <i>Peicen Wang, Xiao-Ling Zhao, and Jinping Ou</i>
10:45-11:00	Experimental Study on Hydrodynamic Response of a Modular Floating Structure System with Chain-type Expansion <i>Yanwei Li, Nianxin Ren, Yaqiong Liu, and Jinping Ou</i>
11:00-11:15	Numerical Investigation of Hydrodynamic Responses of Straight Floating Bridge with pontoons <i>Jihun Song, Chungkuk Jin, and Seungjun Kim</i>
11:15-11:30	Dynamic Behavior of an Operational Floating Offshore Wind Turbine Subjected to Ship Collision <i>Xudong Ye and Kaiming Bi</i>
11:30-11:45	Effect of Equivalent Design Wave Selection on The Stress Prediction of FOWT Semi-submersible Hull <i>Lei Yang and Binbin Li</i>
11:45-12:00	Studies on Integrating a Carbon Capture System with Hydrogen Fuel Production in FLNG Power Generation <i>We Lin Chan, Arun Dev, and Ivan CK Tam</i>
12:00-12:15	Effect of End Boundary Conditions on the Structural Response of the Submerged Floating Tunnel <i>Kiwon Jeong, Hyunwoo Shin, Jinwoo Kim, and Seungjun Kim</i>

10:30-12:15	Day 1 Parallel Session A: Session A3 (V302) Application and Prospect Chairs: Mr. Soon Heng Lim and Dr. Xudong Qian
10:30-10:45	Use of Floating Structures as A Coastal Protection Solution – Challenges and Opportunities <i>Xudong Qian</i>
10:45-11:00	Connector Stiffness Influence on Comfort in Large-Scale Floating Developments <i>Rui P. F. Gomes and Bart Roeffen</i>
11:00-11:15	Research and Development of Thermoelectric Modules and Their Application in Floating Cities <i>Jingming Cai, Yujin Yuan, and Zhiyang Pei</i>
11:15-11:30	A Proposal of Floating Offshore Base for Wind Farm Deployed in EEZ <i>Mako Yamamoto, Saika Iwamatsu, Kazuhiro Iijima, Masaaki Shibata, and Hiroshi Tatsuhara</i>
11:30-11:45	Unlocking the Global Potential of Urban Development Offshore Floating Solutions in the Mediterranean Region <i>Gil Wang, Lieke Bikker, and Tomer Fishman</i>
11:45-12:00	Case Study Analysis: A Game-Changer in The Identification of Requirements for Floating Architecture <i>Livia Calcagni</i>
12:00-12:15	Floating Cities and Waste Management: Case Study of WCV Vessel <i>Artur Karczewski</i>

13:30-14:45	Day 1 Parallel Session B: Session B1 (V322) Hydrodynamic Analysis Chairs: Prof. Ye Li and Dr. Zhiyung Tay
13:30-13:45	Hydroelastic Analysis of a Large Container Ship with Forward Speed Based on Multi-Module Method <i>Yusong Ye, Shixiao Fu, and Shiyuan Zhang</i>
13:45-14:00	Hydrodynamic Investigation on Floating Offshore Wind Turbine Platform Integrated with Porous Shell and OWC Wave Energy Converter <i>Dezhi Ning and Sijia Deng</i>
14:00-14:15	A Frequency-Domain Modeling Approach for Hydroelastic Responses of Pontoon-Type Floating Bridges: An Experimental Validation <i>Minghao Cui, Zhengshun Cheng, Peng Chen, and Torgeir Moan</i>
14:15-14:30	Numerical Investigation and Optimization on The Performance of Wave Energy Converter Array <i>Mengjie Wang, Ling Wan, Chi Zhang, and Zhiyung Tay</i>
14:30-14:45	Heave Vibration Control of Very Large Floating Structures Using Vertical Tuned Liquid Column Dampers <i>Hao Ding, Kaiming Bi, and Ruisheng Ma</i>

13:30-15:00	Day 1 Parallel Session B: Session B2 (V312) Student Presentations Chairs: Dr. Jinghua Wang and Dr. Gil Wang
13:30-13:45	Sustainable Floating City as A Solution to Rising Sea Levels: An Integrated Project for Northwest Coast of Brazil <i>Allan Gomes, Fernando Borguetti, Guilherme Moraes, Sena Takahashi, Tomoki Ikoma, and Kazuo Nishimoto</i>
13:45-14:00	Stability Analysis of a Concrete Semisubmersible Floating Platform for 10 MW Wind Turbines <i>Qingshan Zeng, Zuntao Feng, and Jian-Fei Chen</i>
14:00-14:15	Development of a 6-DOF Actuating System for Implementing Real-Time Hybrid Simulation of a Floating Bridge under Wind and Wave Loads <i>Giheon You, Minyeop Kim, and Yunbyeong Chae</i>
14:15-14:30	Creation of Wave-Free Space by Annular Elastic Floats <i>S. Akasaka, T. Iida, and K. Irifune</i>
14:30-14:45	Comparison Between the Practical Floating PV Generation and Simulation Models <i>Haojie Luo, Suijie Liu, Zhenyu Dou, Qi Wu, Sunliang Cao, and Hongxing Yang</i>
14:45-15:00	Floating Urbanism, The Bold Vision of Streetless Cities <i>Tania Feldzer, John-Salvator Liotta, and Emmanuel Dufrasnes</i>

13:30-15:00	Day 1 Parallel Session B: Session B3 (V315)	
	Dutch Industry Presentations	
	Chair: Dr. Rutger de Graaf	
Company	Representative(s)	Job title
Blue 21	<i>Rutger de Graaf</i>	Co-founder/Delegation leader
	<i>Rui Gomes</i>	Head Maritime Engineering
FlexBase BV	<i>Jan Willem Roël</i>	CEO
NLE / Water Cities	<i>Berend Strijland</i>	Partner

15:30-17:15	Day 1 Parallel Session C: Session C3 (V315)	
	Dutch Industry Presentations	
	Chair: Mr. Xue Bing	
Company	Representative(s)	Job title
Royal Haskoning DHV	<i>Ying Li</i>	Representative China
Boskalis International BV	<i>Xue Bing</i>	Regional Manager
Tunnel Engineering Consultants	<i>Marcel t' Hart</i>	Structural Engineer
MLA+B.V.	<i>Markus Appenzeller</i>	Founder & Partner

15:30-17:25	Day 1 Parallel Session C: Session C1 (V322) Materials for Floating Structures Chairs: Prof. Peng Feng and Dr. Zhiqiang Dong
15:30-15:55	A Green Concrete Material and Its New Biomimetic Sustainable Ocean Floating Structure (Invited Paper) <i>Yufei Wu and Xiaoxu Huang</i>
15:55-16:10	Design Methodology of Bamboo-Raft-Type Floating Structure (BRT-FS) <i>Chongfeng Xie and Peng Feng</i>
16:10-16:25	Durability evaluation of maritime concrete served in ocean environment <i>Qi Zhao, Keitai Iwama, and Xiao-Ling Zhao</i>
16:25-16:40	Fracture Phase Field Method Based Fatigue Crack Propagation Prediction for Circumferential Surface Cracks in Subsea Pipelines <i>Yangyang Qu and Nian-Zhong Chen</i>
16:40-16:55	Hydrogen-assisted Dislocation Pinning and Depinning on Fatigue Crack Growth in Subsea Pipeline Steels <i>Tingsen Zheng and Nian-Zhong Chen</i>
16:55-17:10	Nanoscale Insight on FRP-soil Interfacial Mechanical Properties <i>Pengchang Wei and Zhen-Yu Yin</i>
17:10-17:25	Evaluation of bond strength between FRP bars and concrete under seawater immersion using explainable machine learning models <i>Heng Cao, Xiao Lin Zhao, Mudassir Iqbal, Daxu Zhang, Pei-Fu Zhang</i>

15:30-17:15	Day 1 Parallel Session C: Session C2 (V312) Student Presentations Chairs: Prof. Ling Wan and Dr. Toshio Nakajima
15:30-15:45	Hydroelastic Analysis of a Novel Offshore Fish Cage Design <i>Xinyu Zhang, Hong Zhang, Chien Ming Wang, Yunil Chu, and Mingyuan Ma</i>
15:45-16:00	Submerged Floating Tunnel High Potential Energy System <i>Wei Lin, Mark Cassidy, Yinghui Tian, and Ming Lin</i>
16:00-16:15	Hydroelastic Analysis of a Modular Very Large Floating Structure in A Focused Wave <i>Zhiqiang Li, Xingya Feng, Dengshuo Chen, and Jian-Fei Chen</i>
16:15-16:30	Stability and Hydrodynamic Analysis of a Cylindrical Floating Planter <i>Senqin Zhang, Jinghua Wang, and Xiao-Ling Zhao</i>
16:30-16:45	Effect of Mooring Pretension Force of a Soft-Connected Floating Photovoltaic System under Regular Waves <i>Jenish Baniya, Jian Dai, Zhiyu Jiang, Zhang Chi, and Arvind Keprate</i>
16:45-17:00	A Baseline Study of the Biodiversity Enhancement of the Tung Chung East New Town Extension (TCE) Eco-shoreline Installation at its Pioneer Stage <i>Xie Yao, Cheryl K.C. Chu, Kenneth M.Y. Leung, and Jay J. Minuti</i>
17:00-17:15	A Data-Driven Approach for Urban Transitions in Delta Regions Towards Living with Water Through Floating and Mobile Infrastructure <i>Sridhar Subramani, Mathilde Marengo, Iacopo Neri, and Koen Olthuis</i>

Parallel Sessions (Day 2)

10:15-11:50	Day 2 Parallel Session D: Session D1 (V322) Policy, Social Acceptance and Legal Matters Chairs: Dr. Brydon T Wang and Ms. Tytti Sirola
10:15-10:40	Environmentalisms Clashing: Social Acceptance Problems of Large Floating Structures in Urban Development from Buckminster Fuller until Today (Invited Paper) <i>Stefan Huebner</i>
10:40-11:05	Is Land Reclamation, Ethical, Equitable or Defensible? A New Touchstone for Space at Sea (Invited Paper) <i>Soon Heng Lim</i>
11:05-11:20	Floating Cities and Buoyant Urbanism in International Law: Inundation, Territory and Erga Omnes Obligations <i>Brydon T Wang</i>
11:20-11:35	Addressing San Francisco's Housing Crisis Through Floating Solutions <i>Carolina Jiménez Amador, Greg Henderson, Kirstin Weeks, Runo Okiomah, and Gordon Atkinson</i>
11:35-11:50	Research on Onna Village Regional Management of Marine Tourism <i>Isei Ran and Xiaobo Lou</i>
10:15-12:00	Day 2 Parallel Session D: Session D2 (V312) Hybrid Student and Regular Presentations: Materials and Hydrodynamics Chairs: Prof. Hong Zhang and Dr. Chao Hou
10:15-10:30	Experimental Study on Mechanical Properties of Limestone Calcined Clay Cement (LC3) Seawater Sea-Sand Concrete (Student Presentation) <i>Junpeng Zhang and Xiaodan Teng</i>
10:30-10:45	Structural Design of An Innovative Floating Pontoon Using Ultra-High-Performance Concrete and Steel Skeleton (Student Presentation) <i>Haïen Xue, Yinglei Li, Xiao-Ling Zhao, and Siwei Liu</i>
10:45-11:00	Tensile Behaviour of Inter-Modular Self-Locking Connections of CFST Trussed Hybrid Structures (Regular Presentation) <i>Xialu Liu and Chao Hou</i>
11:00-11:15	New Materials for Floating Concrete Structure: Development of Ultra-High Performance Concrete Based on New Challenges (Regular Presentation) <i>Rui Yu, Yuan Feng, Kangning Liu, and Zhonghe Shui</i>
11:15-11:30	Exploration and Application of Cement Based Floating Structures (Regular Presentation) <i>Xu Gao, Zhonghe Shui, and Xibo Qi</i>
11:30-11:45	Potential Analysis for Coupling Effect of Ship Motion with Liquid Sloshing (Regular Presentation) <i>Sheng-Chao Jiang and Qian Gu</i>
11:45-12:00	Numerical Investigation on Motion Response of Modular Semi-submerged Floating Platform in Waves (Regular Presentation) <i>Lidong Zhang, Jia Wang, Xuanlie Zhao, Jing Geng, Zhiqiang Hu, and C. Guedes Soares</i>

10:15-12:00	Day 2 Parallel Session D: Session D3 (V302) Modular Floating Structures Chairs: Prof. Yufei Wu and Dr. Sergej Antonello Sirigu
10:15-10:30	Towards a Comprehensive Evaluation of Sediment Transport Caused by Off the Coast Modular Floating Structures (MFS) <i>Shai Asher and Gil Wang</i>
10:30-10:45	Characteristic Lengths of Modular Floating Structures <i>Lingzhen Li, Kaiming Bi, and Xiao-Ling Zhao</i>
10:45-11:00	Experimental Investigation of a Novel Concept of Modular Multi-Purpose Floating Structures <i>Filippo Giorcelli, Francesco Niosi, Bruno Paduano, Mattia Glorioso, Oronzo Dell'Edera, Marco Fontana, Gabriella Gaeta, Renata Archetti, and Sergej Antonello Sirigu</i>
11:00-11:15	Dynamic Behavior of Multi-Module Floating Structures with different Connector Types <i>Yoonho Choi, Kilje Jung, Wonjoon Lee, and Jangseok Yi</i>
11:15-11:30	Study on the Hydrodynamic Response of a New Floating Multi-Module Platform with Bionic Conceptual Connection <i>Yanjun Mao, Xiaozhou Ma, Guohai Dong, and Yufei Wu</i>
11:30-11:45	SEAform's Modular Floating Platforms: A Comprehensive Environmental Impact Evaluation <i>L. Pincetti, S. A. Sirigu, A. Rosiello, C. Chicco, F. Viotti, and P. C. Priarone</i>
11:45-12:00	An Innovative Design Concept of Modular Pneumatic Floating Platforms Part II: Semi-Submersible Type Pneumatic Platform <i>Toshio Nakajima, Yoshihiko Yamashita, and Shingo Saito</i>
13:30-15:10	Day 2 Parallel Session E: Session E1 (V322) Wave Tank Tests Chairs: Prof. Yoshitsugu Kawakami and Dr. Wei Huang
13:30-13:55	Investigation on Wave Attenuation Performance of a Flexible Porous Floating Breakwater (Invited Paper) <i>Zitan Zhang, Kwok Wing Chow, and Ye Li</i>
13:55-14:10	Experimental Study on Wave Attenuation Performance of Pontoon Type Floating Breakwater and Structure Optimization <i>Yusheng Shen, Junning Pan, and Yiren Zhou</i>
14:10-14:25	Wave Tank Model Testing Analysis for Lindeman Island Floating Jetty <i>Henry. L. Han</i>
14:25-14:40	Wave Response Experiment on A Floating Model with A Hanging Weight Aimed at Reducing the Response <i>Yoshitsugu Kawakami, Takumi Ishihara, and Ryuji Endo</i>
14:40-14:55	Wave Absorbance System for Towing Tanks <i>Ofer Berman, Ezri Tarazi, Thijs Roumen, and Gil Wang</i>
14:55-15:10	Experimental and Numerical Studies on the Hydrodynamic of a Novel Floating Solar-Wave Converter Hub <i>Hongbin Hao, Jinghua Wang, Huanfeng Duan, and Senqin Zhang</i>

13:30-15:15 **Day 2 Parallel Session E: Session E2 (V312)**
Food, Energy, and Architecture
Chairs: Prof. Tomoaki Utsunomiya and Dr. Changho Moon

- 13:30-13:45 Multiple Cold Water Pipes Concept of a Floating OTEC Plant
Ryoya Hisamatsu and Tomoaki Utsunomiya
- 13:45-14:00 Design and Operation of Ocean Aquaculture Installations
Mr. Aland, PA
- 14:00-14:15 Digital Solutions in Ocean Aquaculture - Possibilities and Challenges
Mr. Aland, PA
- 14:15-14:30 Floating Architecture Strategies: A Case Study of an Adaptive Pavilion in the Venice Lagoon
Diego Antonio Bonilla-Ávila, Andrés Medardo Calero-Trávez, Gabriele Porporato, Roberto Giordano, Alice Rosiello, and Sergej Antonello Sirigu
- 14:30-14:45 Some Ways to Enhance the Sustainability on Floating Architecture
Changho Moon
- 14:45-15:00 Feasibility Research on the World's Longest Floating Infinity Pool Edge
Kimmo Saharinen
- 15:00-15:15 Modularity and Feasible Installation
Kimmo Saharinen

13:30-15:15 **Day 2 Parallel Session E: Session E3 (V302)**
Urban Planning
Chairs: Prof. Joerg Baumeister and Dr. Daniela Procopio

- 13:30-13:45 Performance of Floating Solutions in the Historical Context in East and South-East Asia
Markus Appenzeller and Ruizhi Cao
- 13:45-14:00 Optimal Locations for Seasteading: Geostrategic Opportunities on the High Seas
Joerg Baumeister
- 14:00-14:15 Exploring the Design of Floating Urban Developments: Integrating Density and Environmental Considerations
Barbara Dal Bo Zanon, Rui P. F. Gomes, and Rutger de Graaf
- 14:15-14:30 Urbanizing the Smaller Islands – Sustainable Floating Towns for the Singapore of Tomorrow
Giuseppe Torrisi, Daniela Procopio, and Lim Soon Heng
- 14:30-14:45 Future Marine Urban Habitation – Concepts and Technologies
Zhuowei Zhou, Ningchuan Zhang, Wenbo Gao, and Quanke Su
- 14:45-15:00 A Planning of Floating Habitat Complex in Consideration of Feng-shui (风水) Criteria
Sang W. Pak and Han-seok Lee
- 15:00-15:15 Location Selection Method for Floating MiC Factories
Yushu Yang, Wenkang Guo, Mingyu Zhang, and Heng Li

15:45-17:25	Day 2 Parallel Session F: Session F1 (V322) Environmental Enhancement Chairs: Prof. Shigeru Tabeta and Dr. Katherine Dafforn
15:45-16:10	Studying Water Quality Impacts of Large Scale Floating Structures: Insights from Floating Solar Projects (Invited Paper) <i>Rui de Lima, Rutger De Graaf, and Floris Boogaard</i>
16:10-16:25	Designing Blue Infrastructure to Facilitate Native Species and Prevent Marine Invasion <i>Katherine Dafforn, Melanie Bishop, Tegan Fuchert, Aria Lee, Mariana Mayer-Pinto, Nina Schaefer, and Maria Vozzo</i>
16:25-16:40	Reconstructing Historical Water Quality and Biofouling Dynamics in Tokyo Bay: A Numerical Simulation Approach for Sustainable Floating Infrastructure <i>Teng Tu, Jinxin Zhou, Daisuke Kitazawa, Akane Takahashi, Yoshinobu Yoneyama, and Ikuo Yoshida</i>
16:40-16:55	Exploring Ancient Oasis Wisdom for Sustainable Floating Cities in the Dry Tropics <i>Daniela A., Ottmann</i>
16:55-17:10	Challenges for Characterizing Biofouling on Coastal Floating Infrastructure: A Pilot Investigation of Biofouling on Floating Substrata Installed in Tokyo Bay <i>Jinxin Zhou, Akane Takahashi, Yoshinobu Yoneyama, Ikuo Yoshida, Kotaro Tabata, Ku-niaki Okumura, Teng Tu, and Daisuke Kitazawa</i>
17:10-17:25	Harvest Simulations of Macroalgae in Japanese EEZ <i>Zengjie Xia and Shigeru Tabeta</i>
15:45-17:30	Day 2 Parallel Session F: Session F2 (V312) Construction and Design Chairs: Prof. Xiaozhou Ma and Mrs. Virginie Segura
15:45-16:00	Removal Demonstration Of 2.1-MW Hybrid-Spar Floating Offshore Wind Turbine in Actual Sea Area <i>Koji Tanaka and Tomoaki Utsunomiya</i>
16:00-16:15	Design and Long-term Dynamic Analysis of a Semi-Submersible Concrete Platform for 15 MW Wind Turbines <i>Shangpei Liu, Shunyun Zheng, Chao Li, and JinPing Ou</i>
16:15-16:30	Sustainable Solutions by Design on Offshore Reclamation Construction <i>Ying Li, Marcel 't Hart, Hans de Wit, Wouter de Hamer, and Eric Smit</i>
16:30-16:45	Optimization of a Hexagon-shaped Floating Unit based on the Response Surface Method <i>Ziyi Zhang, Yufei Wu, and Xiaoxu Huang</i>
16:45-17:00	The Challenges of Designing and Constructing Floating Buildings <i>Virginie Segura</i>
17:00-17:15	Worker Tracking using Real-time LiDAR Scanning for Offshore Construction Safety <i>Mingyu Zhang, Yushu Yang, and Heng Li</i>
17:15-17:30	Topological Optimized Offshore Floating Wind Turbine Platform Design <i>Nouman Saeed, Jingliang Gong, Yuejia Wan, Ayesha Saeed, Haijun Zhou, and Lixiao Li</i>

15:45-17:30	Day 2 Parallel Session F: Session F3 (V302) Floating Tunnel and Mooring System Chairs: Dr. Maozhu Peng and Ir. Marcel 't Hart
15:45-16:00	A Novel Submersible Mooring System Suitable for Honeycomb Modular Floating Structure <i>Yufei Wu, Longting Qiu, and Xiaoxu Huang</i>
16:00-16:15	A New Type of Constant Tension Pulley Mooring System for Hexagonal Floating Units in Shallow Water <i>Haohan Chen, Yufei Wu, and Xiaoxu Huang</i>
16:15-16:30	Theoretical Tools for Linear Analysis of Anomalous Waves in Mooring Systems Combining Data in Time and Frequency Domain <i>Ulises Torres-Herrera, Alireza Keramat, and Huan-Feng Duan</i>
16:30-16:45	Dynamic Mooring Analysis of a Submerged Floating Tunnel <i>Marcel 't Hart, Dirk Jan Peters, Lisa Koopman-Meijer, and Coen Eggermont</i>
16:45-17:00	Dynamic Analysis of a Concrete TLP for Offshore Wind Turbine in Different Wave Conditions <i>Zuntao Feng and Jian-Fei Chen</i>
17:00-17:15	Pull-out Capacity of Finned Suction Anchors in Sand Considering Torsional Effect <i>Min-Hao Zhang, Zhen-Yu Yin, and Yong Fu</i>
17:15-17:30	Numerical Study of Lateral Responses of Monopiles with Local Scour Holes in Non-Homogenous Clay <i>Hang Feng and Zhen-Yu Yin</i>

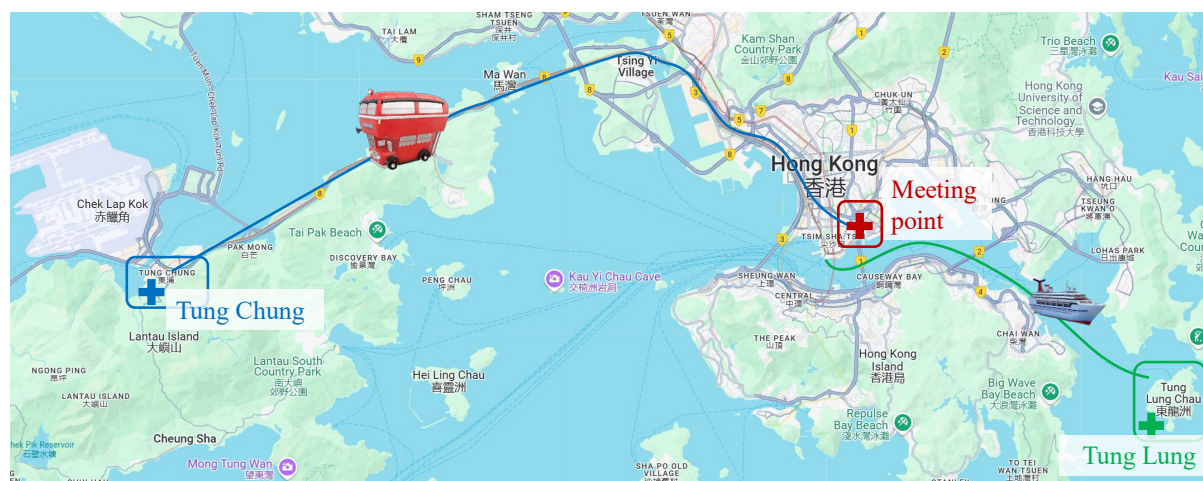
Technical Tour

The Technical Tour will take place on 4 December 2024 (from 8:00 am to 2:30 pm, including lunch), featuring two significant visits:

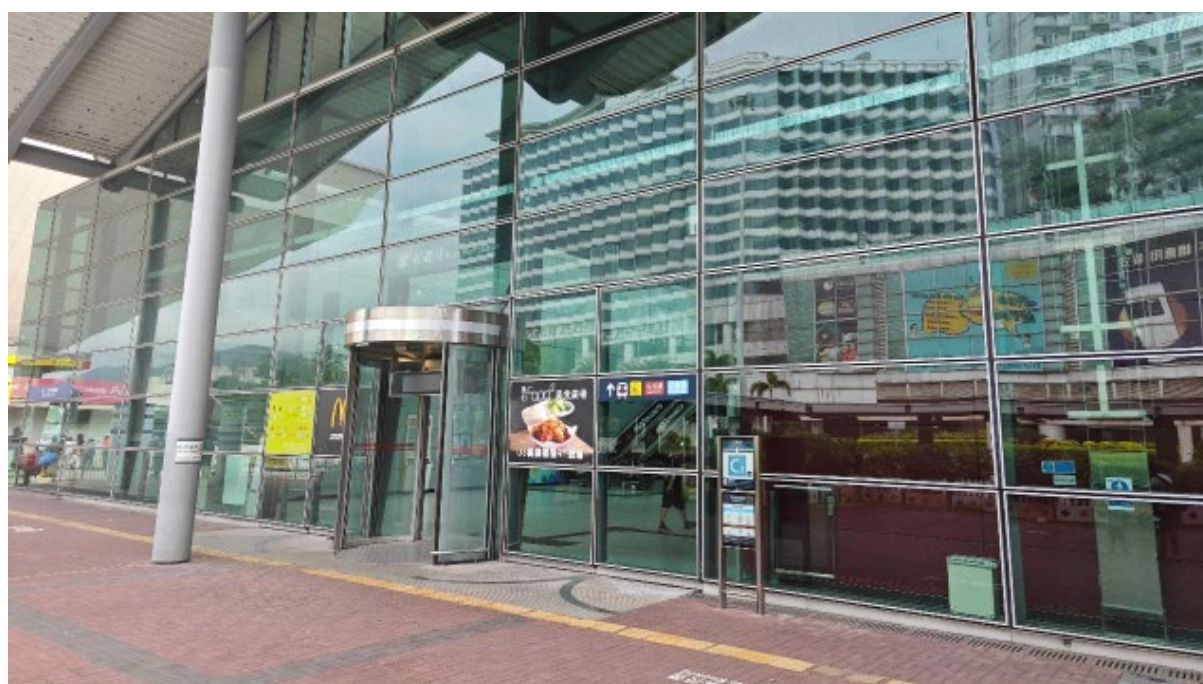
The Agriculture, Fisheries and Conservation Department (AFCD) Floating Fish Farm at Tung Lung Chau: Explore the innovative and sustainable practices in aquaculture at this state-of-the-art facility.

Sustainable Lantau Office - Tung Chung Community Liaison Centre (CLC): Learn about the Sustainable Lantau Project, which focuses on the balanced and sustainable development of Lantau. Additionally, engage in an insightful session about the Hong Kong-Zhuhai-Macau Bridge, highlighting the engineering marvels and sustainable development efforts.

Below is the roadmap for the Technical Tour:



The (morning) meeting point is **Hung Hom MTR Station - Exit C3** (as shown below):





Construction Innovation and Technology Fund (CITF)

CITF objectives: Boost Productivity, Improve Site Safety, Uplift Build Quality and Enhance Environmental Performance

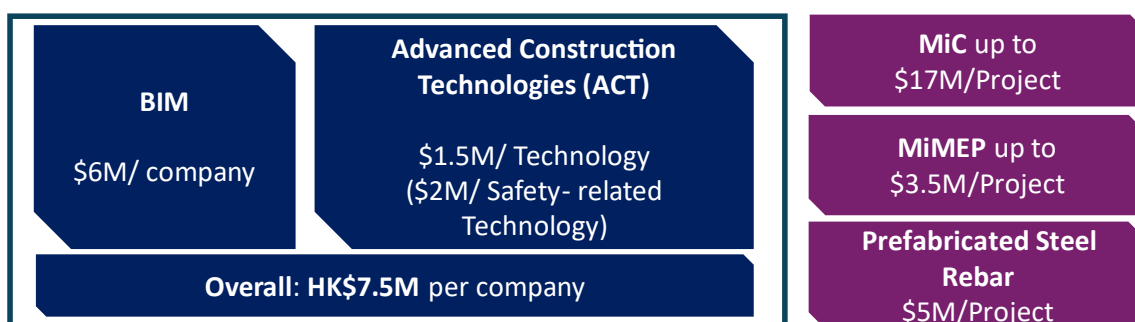
Funding: Total HK\$2.2 Billion set up in 2018 by the Hong Kong SAR Government

Technology Adoption

Eligibility:

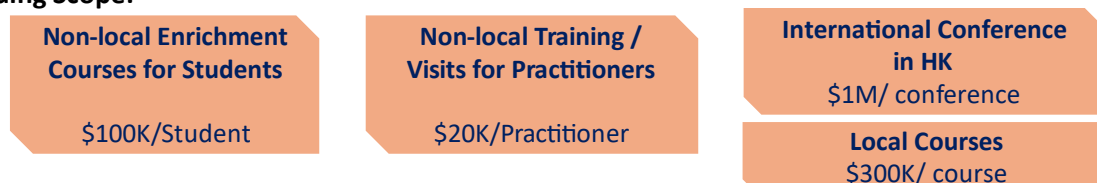


Funding Scope:



Manpower Development

Funding Scope:



Eligibility:



Local collaborative courses	Local	✓	✓	✓	✓	✓
International Conferences in Hong Kong		✓	✓	✓	✓	
Non-local Training / Visits for Practitioners	Non-Local	✓	✓	✓	✓	
Non-local Enrichment Courses for Students		✓				

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