

Cooperation and Exchange Workshop

Smart Solutions for Sustainable Cities and Societies

Smart Cities

Nature-based Solutions

Climate-Smart Agriculture

April 14-16, 2026

Hong Kong - CHINA

<https://www.polyu.edu.hk/cee/~rnus/>



Online Registration



The "Smart Solutions for Sustainable Cities and Societies" workshop is a high-level international forum co-organized by The Hong Kong Polytechnic University (PolyU), The University of Hong Kong (HKU), the Technological and Higher Education Institute of Hong Kong (THEi), and the Università degli Studi di Bari Aldo Moro (UNIBA), Italy. This three-day event serves as a critical platform for leading Hong Kong and Italian scientists, researchers, and institutional leaders to address the multi-faceted challenges of 21st-century urbanization.

Sustainable urbanization remains one of the most compelling challenges of our time, requiring cities to urgently adapt to climate change, mitigate heat island effects, and manage increased flood risks. This workshop expands beyond traditional urban planning by integrating three core pillars:

- Smart Cities: Leveraging advanced IoT sensors, AI, and digital twin technologies to support disaster prevention and infrastructure management.
- Nature-based Solutions (NbS): Highlighting the fundamental role of ecosystem services, urban forestry, and blue-green infrastructure in promoting resilient and healthy urban environments.
- Climate-Smart Agriculture: Exploring sustainable urban farming, agritech, and food security as essential components of stable, future-proof societies.

The workshop fosters strong international cohesion between the Italian academic system, represented by the UNIBA delegation, and Hong Kong's research institutions. Supported by the Consulate General of Italy in Hong Kong and the Digital Policy Office of the HKSAR Government, the event bridges the gap between academic research and government policy.

By facilitating these cross-disciplinary dialogues, the workshop aims to advance the achievement of Sustainable Development Goals (SDGs) and promote innovative strategies for the livelihoods of citizens in smart, green, and safe cities. Welcome to Hong Kong - let's pave the road for new and great collaborations!

The organizers.
Yuhong, Wendy, Allen and Raffaele

Workshop organizers



Prof. Yuhong WANG

Professor
Department of Civil and Environmental Engineering
Director of the Research Centre for Nature-based Urban Infrastructure Solutions
The Hong Kong Polytechnic University



Prof. Wendy Y. CHEN

Professor
Deputy head (research) of Geography Department
Deputy Director of the International Centre for China Development Studies
The University of Hong Kong



Prof. Allen, Hao ZHANG

Associate Professor
Head of the School of General Education and Languages
Technological and Higher Education Institute of Hong Kong (THEi)



Prof. Raffaele LAFORTEZZA

Professor
Rector's Delegate for the International Cooperation in Asia
Member of the Research Centre for Nature-based Urban Infrastructure Solutions, PolyU
University of Bari Aldo Moro, ITALY

I am very glad to welcome and support the seminar titled “Smart Solutions for Sustainable Cities and Societies”, which brings together academic excellence and innovative thinking to address one of the most pressing challenges of our time: building urban environments that are both sustainable and resilient.

Hosted in Hong Kong through the collaboration between the University of Bari Aldo Moro and the Hong Kong Polytechnic University, this event serves as a platform for dialogue, knowledge exchange, and interdisciplinary exploration.

As cities continue to grow and evolve, the need for intelligent, data-driven, and environmentally conscious solutions has become increasingly urgent. I believe that it is crucial to explore how emerging technologies, smart infrastructure, and integrated urban planning can contribute to more livable, efficient, and inclusive cities. By fostering collaboration among researchers, professionals, and policymakers, the event encourages the development of innovative strategies that respond to global sustainability goals while remaining sensitive to local contexts. Participants will have the opportunity to engage with leading experts from diverse fields, including engineering, architecture, urban studies, and environmental science.

Through the discussions, the seminar will highlight best practices and forward-thinking approaches that can be adapted and implemented across different regions. I specifically welcome the partnership between the University of Bari Aldo Moro and the Hong Kong Polytechnic University which reflects a shared commitment to international cooperation and academic excellence. By connecting perspectives from Europe and Asia, the workshop promotes a global vision and open minds to new synergies which refer to different geographical contexts but with same challenges.

Ultimately, the event seeks to inspire new ideas, strengthen academic networks, and contribute to shaping smarter, greener, and more sustainable societies for future generations, by promoting relations and mutual understanding in a logic of dialogue to share experiences and solutions.

Mr. Carmelo FICARRA
Consul General of Italy in Hong Kong



Mr. Carmelo FICARRA
Consul General of Italy in
Hong Kong

Tuesday, 14 April 2026
The Hong Kong Polytechnic University (PolyU)
Venue: V1201, Jockey Club Innovation Tower, PolyU

9:00-9:30 **Registration**

9:30-10:40 **Smart Solutions for Sustainable Cities and Societies (I)**

9:30-9:35 Moderators:
Yuhong WANG & Raffaele LAFORTEZZA – welcome address

9:35-9:40 **Daniel T.L. SHEK** – Associate Vice President of PolyU

9:40-9:45 **Carmelo FICARRA** – Consul General of Italy in Hong Kong

9:45-9:50 **Roberto BELLOTTI** – President of University of Bari Aldo Moro, Bari, ITALY (UNIBA)

9:50-10:05 Building a Future-Ready City – CEDD's Strategies for Sustainable Infrastructure Development
Ada SO, Civil Engineering and Development Department (CEDD), Hong Kong

10:05-10:20 Advanced IoT sensors for sustainable cities
Riccardo VALENTINI, University of Tuscia, Italy

10:20-10:35 Frontiers and opportunities in Sustainable Land Management
Francesco GENTILE, UNIBA

10:35-10:40 **Raffaele LAFORTEZZA & Yuhong WANG** – concluding remark

10:40-11:10 **Coffee Break**

11:10-12:30 **Smart Solutions for Sustainable Cities and Societies (II)**

11:10-11:15 Moderators:
Wendy Y. CHEN & Allen ZHANG – session address

11:15-11:30 Data driven solutions for economic and territorial sustainability
Angela Stefania BERGANTINO, UNIBA

11:30-11:45 Nature-based solutions for coastal protection
Alessandro STOCCHINO, PolyU

11:45-12:00 Which urban greenery for Sustainable Cities and Societies
Giovanni SANESI, UNIBA

12:00-12:30 Panel Discussion
Wendy Y. CHEN & Allen ZHANG
(*Synthesis- top challenges and frontiers in sustainable urbanization and land management*)

12:30-14:30 **Workshop Lunch-break**
(**The Mistral | Italian Restaurant, InterContinental Grand Stanford Hong Kong**)

Tuesday, 14 April 2026
The Hong Kong Polytechnic University (PolyU)
Venue: V1201, Jockey Club Innovation Tower, PolyU

14:30-17:05 Smart Solutions for Sustainable Cities and Societies (III)

14:30-14:35 Moderators:
Francesco GENTILE & Ivy WONG

14:35-14:45 Geospatial Intelligence for Natural Hazards: From Global Landslide Susceptibility Mapping to Real-Time Flood Detection with Edge AI
Domenico CAPOLONGO & Raffaele LAFORTEZZA, UNIBA

14:45-14:55 Pearl Oyster Aquaculture as a Nature-Based Solution for Carbon Sequestration
Kar-hei FANG, James, PolyU

14:55-15:05 Smart Fire Governance: Mapping Risk Where Cities Meet Nature
Mario ELIA UNIBA & Vincenzo GIANNICO, UNIBA

15:05-15:15 Nature-based Solutions for Compact Cities
Yang CHEN, PolyU

15:15-15:25 From Sponge Cities to Basin Systems: Monitoring and Modelling Nature-Based Solutions
Giovanni Francesco RICCI & Francesco GENTILE, UNIBA

15:25-15:35 Empirical analysis for sustainable cities: evidence from the PNRR GRINS project
Mario INTINI & Angela Stefania BERGANTINO, UNIBA

15:35-15:45 Reviving Villages and Substainable Urban-Rural Development
Ivy WONG, PolyU

15:45-16:05 Coffee Break

16:05-16:15 Grape and olive breeding solutions for sustainable food production
Cinzia MONTEMURRO & Domenica NIGRO, UNIBA

16:15-16:25 Optimizing Resource Use Efficiency in Controlled Environment Agriculture
Davide PALMITESSA, UNIBA

16:25-16:35 Reinforcement learning for optimizing hurricane evacuation decisions
Wei MA, PolyU

16:35-16:45 Advanced LiDAR applications in urban forest monitoring
Vincenzo GIANNICO & Mario ELIA, UNIBA

16:45-16:55 From Heat Exposure to Heat Justice: Nature-Based Cooling in High-Density Hong Kong
Siqi JIA, The University of Hong Kong

16:55-17:05 Digital Twins and VR to support natural disasters prevention
Gianvito BRANDONISIO, Sfera Informatica LTD

17:05-17:15 New Breeding Tools to Enhance Wheat Sustainability
Domenica NIGRO & Cinzia MONTEMURRO, UNIBA

17:15-18:00 HK and Italy Board meeting
(Future Initiatives in Italy, MOU and Agreements for Student Exchange...)

HK and Italy Young Scholars meeting
Coordinate by Yang CHEN, PolyU

18:30-20:30 Workshop Dinner (Kong Chiu Lau (港潮樓))

Wednesday, 15 April 2026
InnoEX 2026, Smart Hong Kong Pavilion

9:30-15:00

Technical visit to InnoEX 2026 including visiting the Smart Hong Kong Pavilion organised by the Digital Policy Office

Ms Samuel CHEONG
Systems Manager
Smart Government
Innovation Lab
Digital Policy Office

The Pavilion will be themed on artificial intelligence

Ms. Lilian WOO
Hong Kong Trade
Development Council
(HKTDC)

https://innoex.hktdc.com/dm/2026/sem/index_en.html

The Smart Hong Kong Pavilion is a large-scale exhibition booth at the InnoEX to held at the Hong Kong Convention and Exhibition Centre during 13 – 16 April 2026. It will feature over 100 innovation and technology (I&T) solutions including those developed by different government departments benefitting citizens' daily lives, to demonstrate Hong Kong's solid achievements in advancing the I&T development and smart city development brought about by the concerted efforts of the Government of the Hong Kong Special Administrative Region and various sectors. It will also showcase award-winning I&T solutions from local innovators and students.



15:00-17:00

Organized by
Prof. Wendy Chen
<https://www.hku.hk/>

Technical visit to The University of Hong Kong

Thursday, 16 April 2026

9:30-15:00

Technical visit to the Technological and Higher Education Institute of Hong Kong (THEi)

Organized by
Prof. Allen, Hao Zhang
THEi

COMING FROM THE HOTEL BY MTR
(Taking the Island Line to Heng Fa Chuen Station (Exit A1), then a 15- minute walk)

- [Bachelor of Science in Horticulture, Arboriculture and Landscape Management](#)
- [Bachelor of Science in Food Science and Safety](#)

<https://thei.edu.hk>

Welcome Speech Speakers



Prof. Daniel T. L. SHEK

Associate Vice President
Dean of College of Undergraduate Studies
Chair Professor of Applied Social Sciences
Li and Fung Endowed Professor in Service Leadership Education
The Hong Kong Polytechnic University



Prof. Roberto BELLOTTI

Rector
The University of Bari Aldo Moro, Italy



Mr. Carmelo FICARRA

Consul General of Italy in Hong Kong

Workshop Organizers



Prof. Yuhong WANG

Professor

Department of Civil and Environmental Engineering

Director of the Research Centre for Nature-based Urban Infrastructure Solutions

The Hong Kong Polytechnic University

Topics: Highway engineering, Nature-based Solutions, Sustainable Building and Infrastructure



Prof. Wendy Y. CHEN

Professor

Deputy head (research) of Geography Department

Deputy Director of the International Centre for China Development Studies

The University of Hong Kong

Topics: Specialising in Research and Governance of Urban Green-Blue Spaces, Urban Forestry, Ecological Economics, Environmental Economics



Prof. Allen, Hao ZHANG

Associate Professor

Head of the School of General Education and Languages

Technological and Higher Education

Institute of Hong Kong (THEi)

Topics: Urban Horticulture, Urban Forestry and Urban Greening, Landscape Ecology, Restoration Ecology



Prof. Raffaele LAFORTEZZA

Professor

Rector's Delegate for the International Cooperation in Asia

Member of the Research Centre for Nature-based Urban Infrastructure Solutions, PolyU
University of Bari Aldo Moro, Italy.

Topics: Remote Sensing, Nature-based Solutions, Ecosystem Services, AI-Applications

Presentation Speakers (According to the presentation order)



Ms. Ada SO

Senior Landscape Architect
Civil Engineering and Development Department, Hong Kong



Prof. Riccardo VALENTINI

Professor
University of Tuscia, Italy
IPCC Coordinating and Lead Author
Member of European Academy of Sciences
Topics: Digital Technologies for Forests and Agriculture, Climate Science, Carbon Cycle



Prof. Francesco GENTILE

Professor
Rector's Delegate for Sustainability
Coordinator of the Interuniversity PhD Program in Sustainable Land Management
Department of Soil, Plant, and Food Sciences (Di.S.S.P.A.)
University of Bari Aldo Moro, Italy
Topics: Watershed Management, Soil Bioengineering, Nature-based Solutions, Hydrological Modelling



Prof. Alessandro STOCCHINO

Professor
Department of Civil and Environmental Engineering
The Hong Kong Polytechnic University
Topics: Applied Fluid Mechanics, Turbulence and Mass Transport



Prof. Angela Stefania BERGANTINO

Professor
Director of the GRINS Mobility, Research Center and of the Laboratory of Applied Economics (LEA)
Member of the National PhD programme on Sustainable, Development and Climate Change
Department of Economics, Management and Business Law (DEMDI)
University of Bari Aldo Moro, Italy
Topics: Mobility, Tourism, Regional Policies, Industrial and Energy Economics, Policy Evaluation



Prof. Giovanni SANESI

Professor

Department of Soil, Plant, and Food Sciences

University of Bari Aldo Moro, Italy

Italian Society of Silviculture and Forest Ecology

Topics: Urban Forestry, Urban Green Indicators, Role of Urban Greenery on Human Health and Well-being



Prof. Ivy WONG Siu Wai

Associate Professor

Member of The Royal Institution of Chartered Surveyors

Member of The Hong Kong Institute of Surveyors

Department of Building and Real Estate

The Hong Kong Polytechnic University

Convener of China Innovative Urban-Rural Governance Research Network

Topics: Urbanization and Local Governance, Community Planning, Property Rights Reform



Prof. Domenico CAPOLONGO

Associate Professor of Physical Geography and Geomorphology

Department of Earth and Environmental Sciences

University of Bari Aldo Moro, Italy

Topics: Physical Geography, Geomorphology, Environmental Processes, Landscape Evolution, Remote Sensing, Geospatial Intelligence



Prof. FANG Kar-hei, James

Associate Professor

Director of Research Postgraduate Studies

Associate Director of RCOcean

Deputy Programme Director of DFSM

Department of Food Science and Nutrition

The Hong Kong Polytechnic University

Topics: Seafood Nutrition and Sustainability, Seafood Contamination and Risk Assessments, Microplastics and Nanoplastics, Impacts of Ocean Warming and Acidification



Prof. Mario ELIA

Associate professor

Department of Soil, Plant and Food Sciences

University of Bari Aldo Moro, Italy

Topics: Fire Ecology, Forest Ecosystem, Wildland-Urban Interfaces



Dr. Vincenzo GIANNICO

Assistant Professor

Department of Soil, Plant and Food Sciences (Di.S.S.P.A.)

University of Bari Aldo Moro, Italy

Topics: Urban Forest, Remote Sensing, Machine Learning, Spatial Modeling



Dr. Yang CHEN

Postdoctoral Fellow

Department of Civil and Environmental Engineering

The Hong Kong Polytechnic University

Topics: Nature-based Solutions, River Restoration, Ecological Conservation, Public Engagement and Policy



Dr. Giovanni Francesco RICCI

Assistant Professor

Department of Soil, Plant and Food Sciences (Di.S.S.P.A.)

University of Bari Aldo Moro, Italy

Topics: Watershed Management, Soil Bioengineering, Nature Based Solutions, Hydrological Modelling



Prof. Mario INTINI

Tenure Track Assistant Professor, Honorary Research Fellow

Department of Economics, University of Warwick, UK

Department of Economics, Management and Business Law (DEMDI)

University of Bari Aldo Moro, Italy

Topics: Transport Economics, Territorial Sustainability, Environment, Industrial Economics, Policy Evaluation



Prof. Cinzia MONTEMURRO

Associate Professor of Plant Genetics

PhD Coordinator in Biodiversity, Agriculture and Environment

Department of Soil, Plant and Food Sciences

University of Bari Aldo Moro, Italy

Topics: Plant Breeding, Molecular Traceability, Biodiversity



Prof. Domenica NIGRO

Associate Professor of Plant Genetics
Department of Soil, Plant and Food Sciences
University of Bari Aldo Moro, Italy
Topics: Plant biotechnology, genome editing, climate-smart agriculture



Dr. Davide PALMITESSA

Assistant Professor
Department of Soil, Plant and Food Sciences
University of Bari Aldo Moro, Italy
Topics: Hydroponic crop management, greenhouse horticulture, Controlled Environment Agriculture (CEA)



Prof. Wei MA

Associate Professor
Department of Civil and Environmental Engineering
The Hong Kong Polytechnic University
Topics: Data-Driven Modelling and Optimisation, Transportation Operation and Management, Smart Cities



Dr. Siqi JIA

Research Assistant Professor
Division of Landscape Architecture
The University of Hong Kong
Topics: Urban Planning, Urban Greenspace, Construction Management, Environmental Engineering and Modelling



Dr. Gianvito BRANDONISIO

Cofounder & Technical Director
Sfera Informatica Ltd.
Topics: Cloud-based Computing, AI-Applications, Digital Twins, Virtual Reality

Local Organizers



Mr. Rui ZHANG

Department of Civil and Environmental Engineering
Research Centre for Nature-based Urban Infrastructure Solutions
The Hong Kong Polytechnic University
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Ms. Qinyu ZHUO

Department of Civil and Environmental Engineering
Research Centre for Nature-based Urban Infrastructure Solutions
The Hong Kong Polytechnic University
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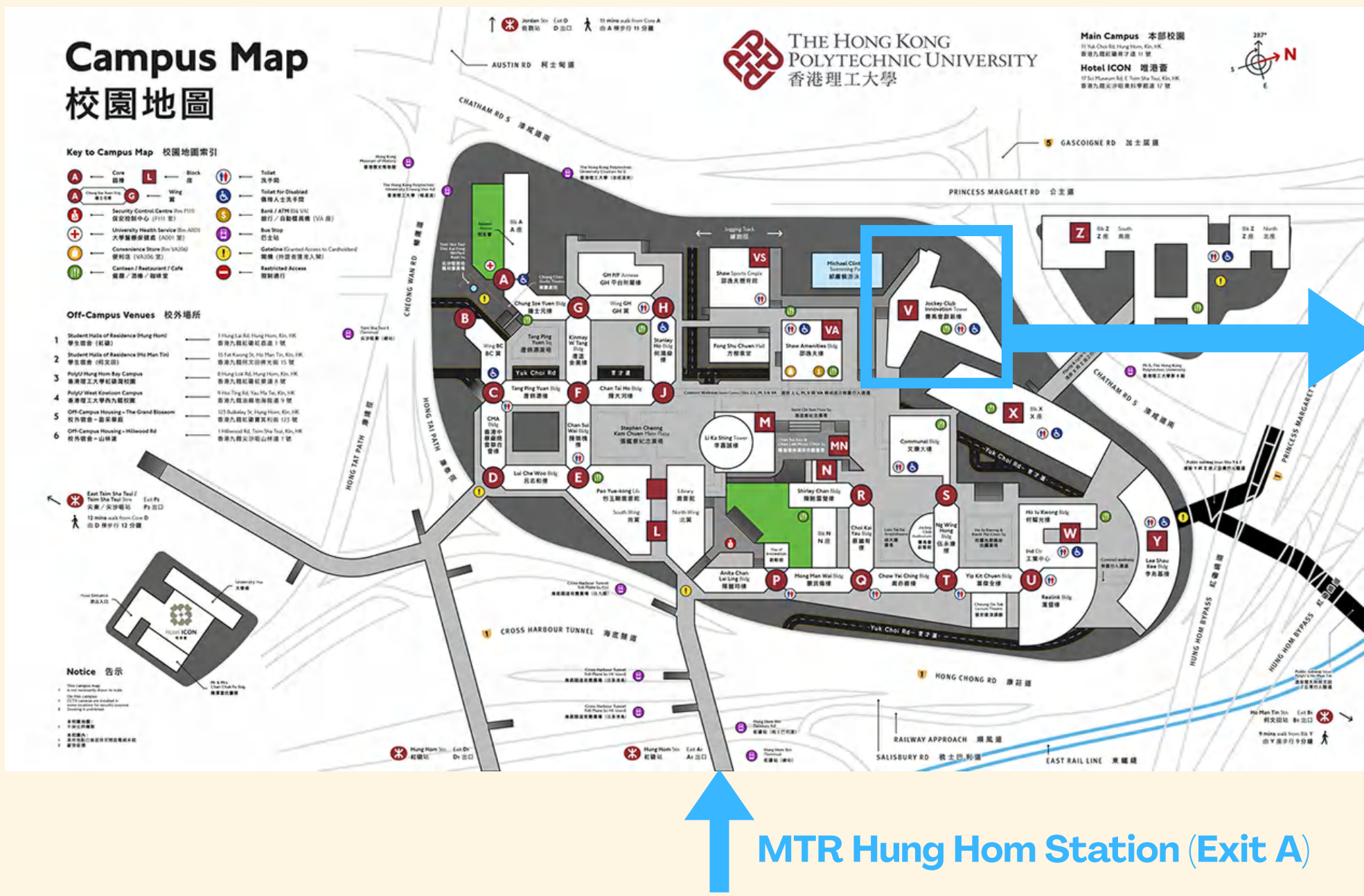


Dr. Yang CHEN

Department of Civil and Environmental Engineering
Research Centre for Nature-based Urban Infrastructure Solutions
The Hong Kong Polytechnic University
Email: yangcee.chen@polyu.edu.hk

Workshop Venue

Workshop venue (14 April 2026): V1201, Jockey Club Innovation Tower, The Hong Kong Polytechnic University



Workshop venue (15 April 2026): Room 1103-1104, The Jockey Club Tower, The University of Hong Kong



Workshop venue (16 April 2026): Room S1301, THEi



Restaurant Venue

Lunch venue (14 April 2026): The Mistral | Italian Restaurant, InterContinental Grand Stanford Hong Kong



Dinner venue (14 April 2026): Kong Chiu Lau (港潮樓)



Visiting in Hong Kong

Octopus card

You may need an Octopus card for public transportation and purchases in Hong Kong.

Kind reminder:

Please buy an Octopus card at Hong Kong Airport. When you leave Hong Kong, you can return the card and get your deposit back.

