



## Sustainable Landscape Design Workflows

Insights, methods and visions for using innovative workflows and technologies to increase the sustainability of urban streets.

**Date:** 2 October 2021 (Sat)

**Time:** 10:00-11:55 AM (Session 1); 13:00-15:45 PM (Session 2)

**Platform:** Zoom (live)



Registration

1000 - 1005 Welcome & introductions

1005 - 1050 New dynamic street ecologies

*Mr. Adam NICKLIN*

1050 - 1100 Q&A

1100 - 1145 BIM adoption within the landscape profession

*Ms. Phyllis ZHOU*

1145 - 1155 Q&A

### BREAK

1300 - 1345 Digital landscape practice and the public domain

*Ms. Heike RAHMANN*

*Ms. Jillian WALLISS*

1345 - 1355 Q&A

1355 - 1440 Re-Charge: the future combines cities + energy + public space landscape architecture + planning with new technologies

*Mr. Andross CHAN*

1440 - 1450 Q&A

1450 - 1535 Hong Kong smart city tree management project

*Sr. Dr. Charles WONG*

1535 - 1545 Q&A

For queries, please contact Ms. Charlene Koo 2559 9438 [charlene.koo@hkalcc.com](mailto:charlene.koo@hkalcc.com)

Collaborating organisations:





## Mr. Adam NICKLIN

Principal / Co-founder, PUBLIC WORK

Adam NICKLIN is a principal and co-founder of PUBLIC WORK, a Toronto based design studio whose work focuses on the intelligent evolution of contemporary cities. The practice of PUBLIC WORK reconsiders the relationship of civic infrastructure, landscape, architecture, context, and experience in search of innovative contributions to urban environments.

PUBLIC WORK is represented by a core team of designers, each with diverse backgrounds and extensive experience in the design and implementation of urban projects across a range of scales. Working together in the studio, we aim to explore and enhance the often hidden qualities of a site, to produce a transformed experience of even the most familiar places.

## | New dynamic street ecologies

In North American Cities, the 20th century saw the design of streets singularly focused on moving more vehicles, more efficiently. Although recent trends in streetscape design have seen a return to reinforcing urban forestry goals, street ecologies are still implemented in a manner largely unchanged for countless generations.

This talk will look at the evolving opportunity of streets to expand their role beyond mobility into placemaking and immersive green infrastructure. New models of dynamic forest plant communities can enhance the street environment and performance, increase thermal comfort, and deliver a dramatic new sense of place. Together, we will analyze a new suite of street-specific technological advances aimed at increasing street flexibility and mobility options. We'll see where such advances will be additive, or where simpler interventions of human centered / biological design and agency may remain more relevant and ultimately successful.

Projects to be discussed:

- Queens Quay East and Cherry Street, Toronto
- University Park, Toronto
- SIDEWALK Project, Quayside, Toronto



## Ms. Phyllis ZHOU

Senior Associate Landscape Architect / Revit Specialist, Sasaki

Ms. Xue Phyllis ZHOU (Senior Associate Landscape Architect | Revit Specialist at Sasaki)

Phyllis is a senior licensed landscape architect and Revit specialist at Sasaki with 10 years of design experience. A driving and growing interest for Phyllis is to explore an optimal and efficient design solution with the help of technology. As a strong advocate and instructor in the use of Revit in landscape design, she has given various presentations on the topic of landscape architects using BIM at national and local conferences. She has also provided Revit trainings at multiple landscape offices. She has extensive urban landscape design and construction experience in both the US and China, on a broad range of projects from regional planning to public and campus space development to private residence design. She received her Master of Landscape Architecture from Harvard Graduate School of Design.

## | BIM adoption within the landscape profession

While Revit is now widely used among architects and engineers, landscape architects are experiencing a growing interest in using Revit as a design and documentation tool, with additional encouragement from both the client and peers within other disciplines. This presentation focuses on the workflow of landscape design that is driven by efficiency and accuracy, with the aid of Revit and other design software, to demonstrate Revit's potential in graphic renderings, design studies, multi-disciplinary coordination, live model share and construction documents. Phyllis will share urban landscape design case studies including streetscapes, examine common challenges, and share tips and tricks, with the goal to inspire more landscape architects to use Revit as one of the powerful tools to help our designs on paper to be realized on the ground.



## Ms. Heike RAHMANN

Senior Lecturer, RMIT University School of Architecture and Urban Design

Heike RAHMANN is a Senior Lecturer in landscape architecture at RMIT University. Her research focuses on the intersection of landscape architecture and contemporary urbanism with a special interest in design practice, theory, and urban ecology. She has practiced in Europe, Asia, and Australia and has co-authored three books, including Tokyo Void: Possibilities in Absence (Jovis, 2014) with Marieluse Jonas, and The Big Asian Book of Landscape Architecture (Jovis, 2020) with Jillian Walliss.



## Ms. Jillian WALLISS

Associate Professor, University of Melbourne School of Design

Jillian WALLISS is an Associate Professor in landscape architecture at the University of Melbourne. Her research explores the relationship between theory, culture, and contemporary design practice. She has published widely, including the book Landscape Architecture and Digital Technologies: Re-conceptualising Design and Making (2016) with Heike Rahmann.

## Digital Landscape Practice and the Public Domain

This seminar presents innovative approaches in the design of the public domain (streets and squares) driven by contemporary digital design practices. It will begin with a discussion on the emergence of a landscape architecture approach to digital practice, highlighting key theoretical and technical concepts. It then introduces three major opportunities for contemporary designers. First the potential of simulation and real-time data in shaping and validating design approaches to urban spaces. Second the role of BIM in shaping new integrated workflows and offering strategic capabilities for landscape architecture to influence project procurement and outcomes. And finally, the opportunities that technology offers for material exploration, fabrication, and novel collaboration. This discussion will draw on award-winning design projects completed in the last five years.

## Mr. Andross CHAN

Chief Executive Officer, Earthasia International Holdings Limited



Andross CHAN is a Principal Landscape Architect at Earthasia, with extensive experience in Canada and Asia. He has worked on large scale multi-disciplinary projects as lead consultant from master planning to construction stage, gaining a proven track record for designing award winning projects in China. He combines the expertise in public space design with deep understanding in energy storage technology to investigate how best to use renewable energy while integrating it with urban and public space design, along with exploring methods to increase efficiency in both the use and storage of renewable energy. EADG (earthasia design group) is one of the largest independent landscape and planning practices in Asia Pacific Region with over 500 staff. Established in 1981, our emphasis is on landscape design coupled with a multi-disciplinary planning approach. At EADG we work closely with each client to find the best responsible sustainable design solutions which will meet the challenges of rapid urbanization in Asia.

## Re-Charge: The Future Combines Cities + Energy + Public Space Landscape Architecture + Planning With New Technologies

In the post-COVID era, established work flows and living patterns have been adapted, sustainability objectives have been re-evaluated, and the importance of the public realm has been brought back into focus. New technologies, changing lifestyles, achieving carbon neutrality and climate change adaptation are now acutely converging; this requires a new pro-active approach to the role of the Landscape.

One approach is through a rethink of Energy - how its multi-modal generation, renewable sources and storage can benefit the city and community. Public space can be the conduit for new technological application and piloting, whilst Landscape Planning can ensure it meets essential community and environmental needs.

This presentation will outline the vision of a "Rechargeable City & Park," and how the revitalized role of the public realm and streetscape can also generate, store and release energy; using emerging technologies and new materials.



## Sr Dr. Charles WONG

Professor, Associate Dean, Department of Land Surveying and Geo-Informatics  
The Hong Kong Polytechnic University

Sr Dr. Charles M. S. WONG is an Associate Professor at the Department of Land Surveying and Geo-Informatics, the Hong Kong Polytechnic University. In 2006-2007, he was a Fulbright scholar with the Earth System Science Interdisciplinary Center, University of Maryland, College Park. He is the official site manager for NASA's AERONET station in Hong Kong. In 2014, he has received an Early Career Award from the Hong Kong Research Grants Council; two Faculty Award for Outstanding Performance / Achievement Award in Teaching in 2014 and 2016, respectively; a Dean's Award for Outstanding Achievement in Research Funding in 2016. He has been working on various projects including the use of remote sensing to study urban heat island effect, urban environmental quality, landslides, vegetation and ecosystems, spectral mixture analysis, aerosol retrieval, air quality and dust storm monitoring. Dr. Wong has published about 120 SCI journal publications since 2005.

### **| Hong Kong Smart City Tree Management Project**

Urban trees bring people close to nature. Researchers always think about the future and how we can better harness smart technologies to protect the environment and plan for resilient, sustainable urban development of the streetscapes setting. While climate change has led to unprecedented frequent and extreme wind events, urban tree stability is turning uncertain and the exacerbated root anchorage of a tree may result. The urgent need for developing the Smart Monitoring System for urban tree management is essential to measure tilting angles and directions of tree displacement, which enables large-scale daily remote monitoring via low-power wireless transmission technologies (LPWAN). The novel System is the first-of-its-kind applying on the urban forestry management with Spatial Big Data Analytics and AI algorithms on the GIS-based platform, to investigate the tree stability trend and its potential risks to tree failure, which ultimately minimize public safety hazard on the streetscapes in the hustle and bustle cities.

