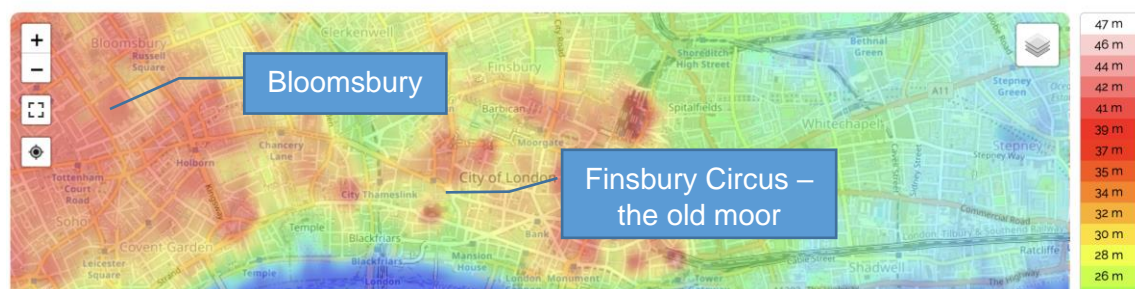


The life-cycle of a void

Architects and planners have long been interested in urban voids. Or left-over spaces, terrain-vague and other terms for the same idea. My former PhD student, architect and planner, Christine Mady (Notre-Dame University) studied the evolution of these spaces in post-civil war Beirut. Students on FoA's interdisciplinary foundation course AFC1001 have an exhibition next week in Hong Kong's PMQ centre. *Beyond What We See* might sound like the title of a Kazuo Ishiguro novel but it is an attempt to capture the essence of the intellectual challenge posed to AFC1001 students. There are reasons behind every pattern we observe, whether in nature or the man-made elements of a city. I used to give second year urban planning undergraduates a lecture purely based on understanding homologue patterns: like the similar sinusoidal forms created in the sutures of a human skull, a meandering river and a snake trail. These are homologous in the sense of originating from similar physics processes (at vastly different scales). What we see in the patterns of a city's built environment has evolved and is bound together by regularities in the way individuals interact via the trade in land and buildings. Working on the exhibition with Matthew Pryor (Landscape Architect) and Nik Ettel (graduate of the Academy of Fine Arts, Vienna), we may have developed a new theory. A theory explains and predicts patterns by generalising from particular cases. I've called the theory the *life cycle of a void*, or in more exotic terms, life cycle of a Thomasson¹ (don't ask). A left-over space is a left-over land-use. It's not actually a void. But let's call it a void for now.

¹ Akasegawa, Otsuji, Fargo, & Fargo, Matt. (2009). *Hyperart: Thomasson* (U.S. ed.). New York City: Kaya Press: Distributed by D.A.P./Distributed Art.

To the east of the Roman city of London lies the naturally marshy, clay-rich land of the Thames flood-plain. As London grew, the cattle and other herds that sustained the city's population would have roamed freely on ancient commons – land with no specific ownership. As overgrazing reduced the productivity of the grassland, a *tragedy of the commons*² would have unfolded: it is in everyone's interest to overconsume because in grazing cattle on London's commons, a farmer reaps 100% of the gains but shares only a fraction of the cost. Theoretically, a tragedy of the commons occurs when there are *too few property rights* (over land in this instance). Then at some stage in London's history, the commons were enclosed, which incentivised the new owners to invest in the land, draining it, improving it and curating it to produce more private and social value. Imagine a small piece of difficult-to-drain marshy moorland on the outskirts of the City of London in the 15th century. A void in the otherwise productive agricultural estate of the medieval Manor of Finsbury, leased since 1350 to the Lord Mayor of London. As London spread eastward, the moor became a void in London's built environment, surrounded initially perhaps by informal worker cottages, then traders and then industrial uses. While it may have been more rational, profitable, efficient and beautiful to redesign the whole of this part of the Finsbury Manor in a grand redevelopment scheme, the void continued to exercise its stubborn influence on urban morphology. A mile or so to the west, 18th century surveyors, developers and architects turned the Bloomsbury and St Giles Manors, into the smart squares around what is now UCL territory. Bloomsbury is on higher ground as the topographic model shows, and as far as I know, there were no awkward marshes to interrupt the architect's plan (although it is interesting to note in the topographic map, that Russel Square appears to be lower than its surrounding built-up land and therefore potentially may also have been shaped by poorly drained land).



(Source: <https://en-gb.topographic-map.com/maps/lpj5/London>)

But the old moor in Finsbury Manor had become trapped in a patchwork of privately owned properties, making grand-planning impossibly costly. The situation is described in legal scholarship as a *tragedy of the anti-commons*³. An anti-commons problem arises when there are *too many* property rights (not *too*

² Hardin, G. (1968). The Tragedy of the Commons. *Science*, 162(3859), 1243-1248. DOI: <https://doi.org/10.1126/science.162.3859.1243>

³ Heller, M. (1998). The Tragedy of the Anticommons: Property in the Transition from Marx to Markets. *Harvard Law Review*, 111(3), 621-688. DOI: <https://doi.org/10.2307/1342203>

few as with a commons tragedy). In 1527, perhaps because of the mosquitos or a different kind of commons tragedy – garbage and sewerage dumping, the moor was drained and laid out with walking paths using gravel from the Thames. Almost 500 years later, it is the green jewel of Finsbury Circus, not far from Liverpool Street station and highly valued by city workers in their lunch-breaks, by visitors and by owners of properties that face it. The park yields private value and public value to citizens who use it and appreciate it from a distance.

So, here's a theory of voids, or Thomassons, or left-over-spaces. In the beginning there is a commons problem. This resolves by the emergence of a land market. Land is fragmented into private ownership parcels. City land becomes well cared for, well designed, coordinated with other land and functions, and it grows in value. But some left-behind bits of land and perhaps also structures on the land, escape this process. They remain in ambiguous ownership, or too small or awkward or costly to turn into more productive contemporary use. They may become anti-commons problems. Then over time, some of these gain value in and of themselves. Perhaps by some collective investment. Or perhaps because they become one of those quirky features of a locality that help give a place its identity. Over time, an ancient ruin becomes a valuable heritage asset. A surviving Chinese nail-house becomes a national monument. The anti-commons problem that trapped unproductive land eventually creates something that adds more-than-the-sum-of-the-parts value. Not all Thomassons make the final cycle. Some voids eventually die. Some remain unnoticed, being neither valuable nor a nuisance. Others complete their life-cycle in triumph. All cities have their examples: Times Square, which started as an awkward aberration in the Manhattan grid caused by an old Native Indian trail crossing the island diagonally. Or a tiny left-behind gap with rising land value, eventually gets developed into the narrowest house in the country, or into some artfully designed commercial building that commands a price premium for its uniqueness, spill-over land value and cultural value.

Colleagues in the Department of Landscape Architecture have asked if DLA students can have more exposure to academic discourses on property rights, land economics and urban governance and management. To think about realisation of the many brilliant design ideas coming from DLA's studios, students have to understand something about the processes *beyond what we see*. Perhaps we could have a common course developing such knowledge at intermediate level for all our undergraduate, or postgraduate, students?

If anyone is interested in working up the tentative theory of urban voids above into a formal academic paper, I have the ideas if you have the time.

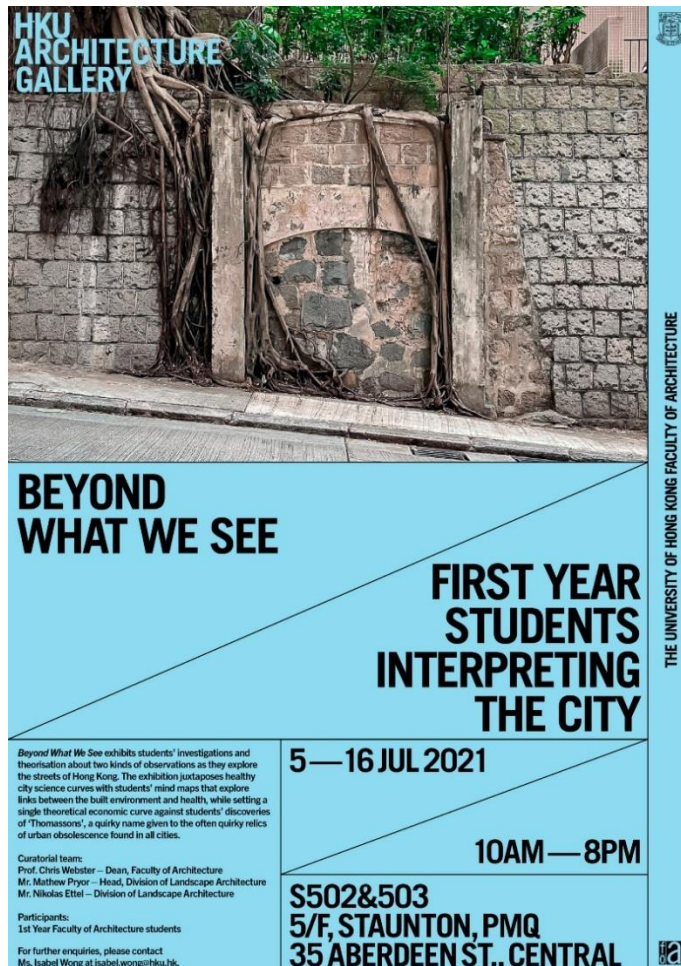
Many congratulations to those mentioned below. Great achievements from great scholars. I am particularly pleased at the progress of FoA colleagues who are turning their research into start-ups and other forms of entrepreneurial work (Llewellyn Tang's company is featured, as is Jiangping Zhou's platform technology grant, which follows on from his recent Innovation Technology Fund project). While moving into business and industry engagement more generally

can give us less time to research and write, I have observed that when correctly balanced, it can sharpen our academic research and writing, enhancing significance, rigour and originality. In the new FoA space we plan to open up on Knowles Ground Floor later this year, there will be a place for technological and artistic making (for example with wood and other natural materials, robots, sensors and IOT), which is an essential part of the academic-to-society value and knowledge production chain.

Chris
Dean, FoA

Faculty of Architecture

1. 'Beyond What We See – First Year Students Interpreting the City' Exhibition



Date:	5 July 2021 (Monday) – 16 July 2021(Friday)
Time:	10:00am – 8:00pm
Venue:	S502 & S503, 5/F, Block A, PMQ, 35 Aberdeen Street, Central, Hong Kong
Opening Event:	5 July 2021 (Monday), 7:00pm

Beyond What We See exhibits students' investigations and theorisation about two kinds of observations as they explore the streets of Hong Kong. The exhibition juxtaposes healthy city science curves with students' mind maps that explore links between the built environment and health, while setting a single theoretical economic curve against students' discoveries of 'Thomassons', a quirky name given to the often quirky relics of urban obsolescence found in all cities.

Curators:

Professor Chris Webster – Dean, Faculty of Architecture

Mr Mathew Pryor – Head, Division of Landscape Architecture

Mr Nikolas Ettel – Lecturer, Division of Landscape Architecture

Curatorial Assistants:

Michelle Chan, Xinjie Jiang, Yadian Wang

Participants:

First Year Faculty of Architecture students

For more information, visit the [HKU Architecture Gallery webpage](#).

2. Welcome to the following colleagues, who have joined the Faculty in June 2021:

<p>Dr Jiang, Feifeng</p>	<p>Post-doctoral Fellow, joined the Faculty of Architecture, w.e.f. 1 June 2021.</p>
 <p>Dr Wang, Chongyu Michael</p>	<p>Assistant Professor, joined the Department of Real Estate and Construction, w.e.f. 1 June 2021.</p>
 <p>Dr Xu, Jinying</p>	<p>Post-doctoral Fellow, joined the Department of Real Estate and Construction, w.e.f. 11 June 2021.</p>
 <p>Dr Yang, Tianren</p>	<p>Assistant Professor, joined the Department of Urban Planning and Design, w.e.f. 16 June 2021.</p>

Department of Architecture

1. Dr Cole Roskam

- gave an invited lecture titled 'Constructing Climate in Colonial Hong Kong, 1842-1912' as part of the Collins/Kaufmann Forum for Modern Architectural History at Columbia University, on 4 May 2021.
- gave an invited lecture titled 'Africa, China, and Architecture in the Intermediate Zone' as part of the *Entangled Modernities: Perspectives of a Global History of Architecture* public lecture series, at the Bauhaus University Weimar on 25 June 2021.

ENTANGLED MODERNITIES

DIGITAL LECTURE SERIES

SUMMER 2021
TUESDAY AFTERNOON

23/4 SEBASTIAN CONRAD
The History of Architecture in Japan as the First Postcolonial Phenomenon and the Quest for Ottoman Connections

7/5 NANCY H. KWAK
Defining the Los Angeles as Global Housing Projects: Postscript

14/5 SIBEL ZANDI-SAYEK
Ottoman Knowledge Systems in the Early Modern Age: A Trans-Regional Perspective

21/5 ESRA AKCAN
The Global Dimensions of Architectural History

28/5 REGINA BITTNER
The Transnational Context: Encounters, Stories, and Global Connections

4/6 ZEYNEP ÇELİK
Speaking back to Orientalism: An Art Historical Discourse

11/6 AYALA LEVIN
Project, Space, Context, Character and Ethical Independence: African Subject

18/6 SWATI CHATTOPADHYAY
Unsettling Modernity: Decolonial Migration and Architecture

25/6 COLE ROSKAM
From China, and Architecture in the Intermediate Zone

2/7 ŁUKASZ STANEK
Architecture as Global History

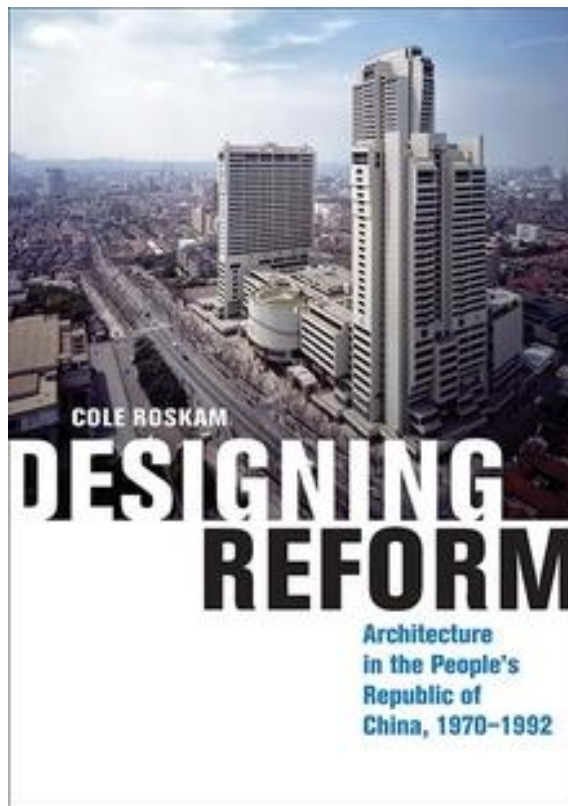
9/7 CAROLINE MANIAQUE-BENTON
The National Culture of a Specific Culture: from the World's Capital and its Reception

CONVENED BY
HANS-JÜRGEN
DIERCKE AND GISELLE
BLUMENFELD ARCHITECTURE
+
CLAUDIA TORD
SCHULTE ARCHITECTURE
NOBIS

**PERSPECTIVES OF A GLOBAL
HISTORY OF ARCHITECTURE**

Bauhaus
University
Bauhaus-Universität Weimar

- his book, [*Designing Reform: Architecture in the People's Republic of China, 1970-1992*](#) (ISBN: 9780300235951), will be published by Yale University Press on 30 November 2021.



Abstract. *In the years following China's Cultural Revolution, architecture played an active role in the country's reintegration into the global economy and capitalist world. Looking at the ways in which political and social reform transformed Chinese architecture and how, in turn, architecture gave structure to the reforms, Cole Roskam underlines architecture's unique ability to shape space as well as behavior. Roskam traces how foreign influences like postmodernism began to permeate Chinese architectural discourse in the 1970s and 1980s and how figures such as Kevin Lynch, I. M. Pei, and John Portman became key forces in the introduction of Western educational ideologies and new modes of production. Offering important insights into architecture's relationship to the politics, economics, and diplomacy of post-Mao China, this unprecedented interdisciplinary study examines architecture's multivalent status as an art, science, and physical manifestation of cultural identity.*

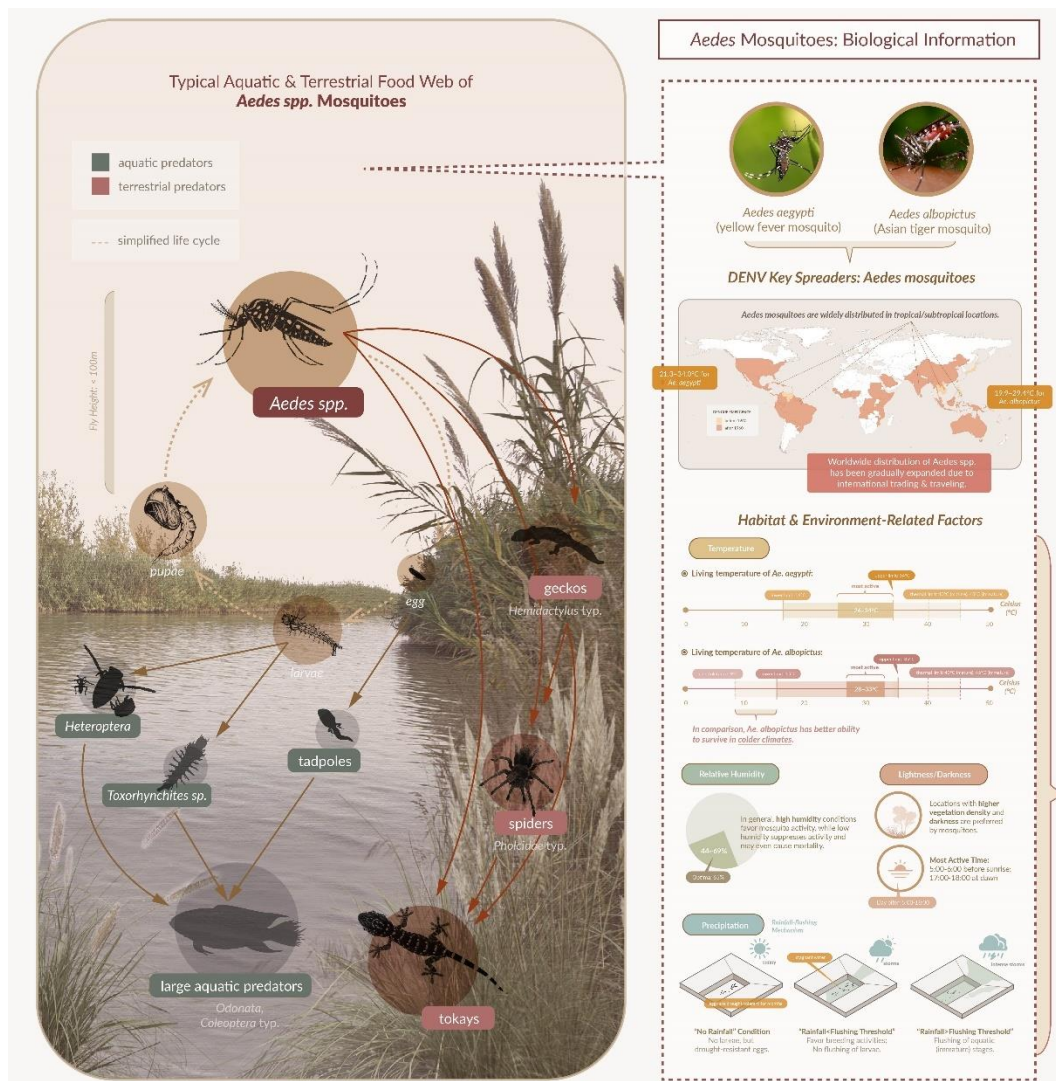
2. Ulrich Kirchhoff

- Was interviewed in the South China Morning Post article titled 'Probe into wobbly Shenzhen skyscraper turns to vibration tests after inquiry fails to find cause', published on 1 June 2021:
<https://www.scmp.com/news/china/article/3135593/probe-wobbly-shenzhen-skyscraper-turns-vibration-tests-after-inquiry>

Division of Landscape Architecture

1. Dr Ren Chao

- has been awarded a grant of HK\$860,986 by the Food and Health Bureau, under the Health and Medical Research Fund (HMRF) 2019, for her project titled 'Developing a Spatial Model of Dengue Fever-related Vulnerability and Risk Detection of Hong Kong from a Socioeconomic and Environmental perspective' (Project No.: 20190672).



Department of Real Estate and Construction

1. Dr Llewellyn Tang

- his start-up, Llewellyn & Partners Co. Ltd. (LPC), received Gold Award (Emerging BIM Company Category) from the Hong Kong Institute of Building Information Modelling (HKIBIM) at HKIBIM Awards 2020, on 29 March 2021: https://www.hkibim.org/media/2021/HKIBIM%20Award%202020_Result.pdf

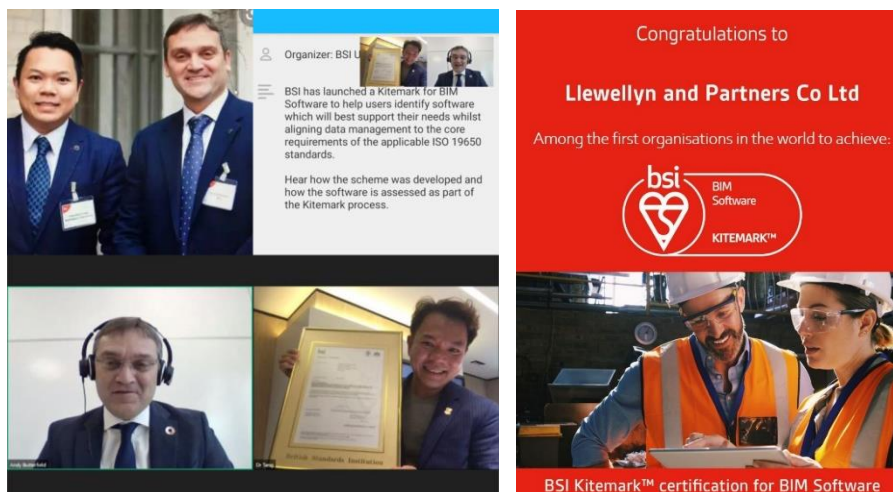
Winning speech sharing: <https://www.youtube.com/watch?v=Y6JoudaHXdo>



- LPC has also been awarded the new BSI BIM Software Kitemark™ on the same day, for its [AutoCDE](#) and [AutoBIM](#) softwares having achieved full compliance with the ISO BIM standards. LPC has become one of the first organisations globally to achieve this mark of trust.

The BSI Kitemark is a global benchmark for excellence in digital project delivery. The certificate highlights LPC's full capability to offer a true digital twin platform and full compliance of ISO19650-1 to ISO19650-5 and BS1192-4 to adopt BIM functionality, security-minded approach, user support, and organisational resilience.

<https://www.bsigroup.com/en-GB/about-bsi/media-centre/press-releases/2021-press-releases/march/asite-llewellyn--partners-and-zutec-become-first-organizations-to-achieve-bsi-kitemark-for-bim-software/>



Department of Urban Planning and Design

1. Dr Roger Chan

- served as PhD Thesis External Examiner to WANG Jue, Department of Geography and Resources Management, The Chinese University of Hong Kong. Thesis title: 'A Study of Government-driven Regional Cooperation in the Yangtze River Delta Region'.

2. Professor Rebecca Chiu

- was invited to be advisor for the tender of Ove ARUP & Partners Hong Kong Ltd for the consultancy study on artificial islands in Central Waters under the Lantau Tomorrow Vision. The company is awarded the 42-month study; and the value of the contract is about HK\$220 million. It covers planning, engineering, and a feasibility study on road and rail links. The development project aims to alleviate the acute shortage of land in meeting the medium-to-long-term housing, social and economic development needs of Hong Kong. Professor Chiu shall continue to advise on the study.

3. Dr Weifeng Li

- has been awarded a University Seed Fund for Basic Research, at the amount of HK\$118,000, for his project titled 'Do Climatic Factors Modify the Effect of PM1 on Lung Cancer Incidence in China?'.

4. 'Working in Canada as a Development Planner' Alumni Sharing Session

- Three young graduates from the MSc in Urban Planning (MUP) programme gave an alumni sharing session via Zoom Webinar on 10 June 2021, to share their professional planning and development experiences in two Canadian cities (Vancouver and Edmonton). These graduates were:

Mr TEO Jia-Jie, Jerome (MUP 2017)

Real Estate Development Manager
Vancouver, Canada

Mr TING Yick Nam, Edison (MUP 2017)

Development Planner
City of Coquitlam, Vancouver, Canada

Mr YEUNG Kin Ho, Kenneth (MUP 2014)

Development Planner
Edmonton, Canada

They discussed the opportunities, challenges, and career paths for new graduates in the pursuit of a planning career outside Hong Kong. This Webinar was part of our 40th Anniversary Event Series launched in

celebration of the establishment of the Centre of Urban Studies and Urban Planning (CUSUP) in 1980 and its subsequent development to become the Department of Urban Planning and Design (DUPAD) at the University of Hong Kong.

Watch the Webinar at: <https://fb.watch/697UrezCiM/>

THE UNIVERSITY OF HONG KONG 香港大學
faculty of architecture 建築學系
Department of Urban Planning and Design
城市規劃及設計系
Centre of Urban Studies and Urban Planning
城市及都市研究中心

DUPAD CUSUP 40

DUPAD/CUSUP 40TH ANNIVERSARY EVENT SERIES
ALUMNI SHARING SESSION

WORKING IN CANADA AS A DEVELOPMENT PLANNER

The Master of Science in Urban Planning programme provides comprehensive training in urban planning and development of world cities. In this webinar, three young graduates from the programme (Edison, Jerome, and Kenneth) will be sharing their professional planning and development experiences in two Canadian cities (Vancouver and Edmonton). They will discuss the opportunities, challenges, and career paths for new graduates in the pursuit of a planning career outside Hong Kong.

SPEAKERS:



Mr. TING Yick Nam Edison
(MSc (Urban Planning), 2017)
Development Planner,
City of Coquitlam,
Vancouver, Canada



Mr. YEUNG Kin Ho Kenneth
(MSc (Urban Planning), 2014)
Development Planner,
Edmonton, Canada



Mr. TEO Jerome Jia-Jie
(MSc (Urban Planning), 2017)
Real Estate
Development Manager,
Vancouver, Canada

10 JUNE 2021 (THURSDAY)
12:00 – 13:00 (GMT+8)

Registration Link: <https://bit.ly/3oP3RAU>
(Registration Deadline: 9 June 2021 12:00 noon)

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f @dupadhku
t @dupadhku



*All are welcome

Built Heritage Research Collaborative

Built Heritage Research Collaborative (BHRC) hosted its first public discussion event on the future usage of the Central waterfront (also known as 'Site 3'), which will soon undergo a significant transformation as a large part of the reclaimed area has been put up for tenders. Participants reviewed works by three teams of architects who have created initial designs on the future usage of the site, addressing issues of connectivity, provision of public space and the conservation and restoration of historically-significant buildings.

Participating faculty members include Alain Chiaradia, Cecilia Chu, Sony Devabhaktuni, Natalia Echeverri, and Ying Zhou. For more information, visit:

[街知巷聞：從保育郵政總局 想像「新中環」](#)

[中環新海濱三號用地截標在即-民間建築團體提保留郵政總局方案](#)

[民間建築團隊提替代方案 保留中環郵政總局、兼容商業發展](#)



A design proposal by Aona Architects, led by alumnus Charles Lai (PhD 2021)

Centre of Urban Studies and Urban Planning

1. Dr Roger Chan

- has published the following co-authored paper:

Chan, R. C. K., & Bhatta, K. D. (2021). Trans-Himalayan connectivity and sustainable tourism development in Nepal: A study of community perceptions of tourism impacts along the Nepal-China Friendship Highway. *Asian Geographer*, Advance online publication. s

DOI: <https://doi.org/10.1080/10225706.2021.1943470>

Abstract: *With the introduction of China's Belt and Road Initiative (BRI), the government of Nepal has agreed to develop links with China through the development of cross-border infrastructure such as railway and road networks. It is assumed that increased trans-Himalayan connectivity will bring new dynamics to the socioeconomic development of communities, and tourism is one of the significant factors behind the acceleration of such developments. Improved connectivity promotes accessibility, economic activity, and local development, along with increased tourism development. Most settlements along the Nepal–China Friendship Highway are expected to experience an increase in economic activity, tourism, and local development. In this regard, considering the cases of Dhulikhel and Banepa, key towns on the Nepal–China Friendship Highway, this research aims to explore various impacts of transport infrastructure on tourism development and associated aspects of tourist destinations. Multiple methods of data collection, including interviews with survey respondents, questionnaire surveys, participant observations, and archival research have been adopted. Perceived impacts reveal positive and negative effects on infrastructure and tourism and to local communities. It is envisaged that integrated policies of sustainable tourism development and transport infrastructure should be in place.*

- was featured in a media interview with the *Hong Kong Commercial Daily* on 21 May 2021, on the Greater Bay Area's regional development and cooperation.

2. Dr Derrick Ho

- has co-authored the following book:

Ho, H. C., Chan, E., & Ng, S. (2021). 觀塘區公屋發展的歷史：社區及環境變遷與城市規劃的連結 [A history of public housing development in Kwun Tong: Connection between socio-environmental change and urban planning].

Abstract: *Based on an ethnographic study, this book describes the perceived image of Kwun Tong's public housing estates from residents, including older adults who have lived there for long, younger generations who were born in Kwun Tong, as well as new immigrants and ethnic minorities. This study found that place identity was quite different among these residents, and their needs from the community were also different. Linking to the cultural values, the definitions and interpretations of collective memory are distinctive between different age/population groups. The difference between various population groups could possibly be due to the original motivation to move to Kwun Tong – just to enjoy a better living environment with pragmatic design, while this move did not consider cultural and social factors. For those older adults who lived in the estates for long, some families were the displaced population due to hazards or informal settlement, and this resettlement once again gathered them as a group with common interests. However, faced with economic burdens, these families seldom had experiences of 'life' other than 'work' and 'survival', and their lifestyles as well as lifelong vision were focusing on economic factors. This created an illustration for these older adults that Kwun Tong has 'no culture and history', and they did not know how to experience the culture and history and had no ideas how to share the cultural information of Kwun Tong to the others, including their second generations. This becomes a disconnected understandings between older and younger generations, while the younger generations could only experience the culture and history by what they have perceived and remained to see in their daily lives. In the face of urban renewal, how to continuously and effectively pass cultural values and collective memory to the next generation and new residents, while maintaining the purposes of pragmatic living in public housing estates, would be one of the keys for urban planning in the next stages.*

- has published the following article:

Bhattacharjee, N. V. et al. [Ho, H. C. as one of the collaborators] (2021). Mapping inequalities in exclusive breastfeeding in low- and middle-income countries, 2000–2018. *Nature Human Behaviour*. <https://www.nature.com/articles/s41562-021-01108-6#citeas>

Abstract: *Exclusive breastfeeding (EBF) – giving infants only breast-milk for the first 6 months of life – is a component of optimal breastfeeding practices effective in preventing child morbidity and mortality. EBF practices are known to vary by population and comparable subnational estimates of prevalence and progress across low- and middle-income countries (LMICs) are required for planning policy and interventions. Here we present a geospatial analysis of EBF prevalence estimates from 2000 to 2018 across 94 LMICs mapped to policy-relevant administrative units (for example, districts), quantify subnational inequalities and their changes over time, and estimate probabilities of meeting the World Health*

Organization's Global Nutrition Target (WHO GNT) of $\geq 70\%$ EBF prevalence by 2030. While six LMICs are projected to meet the WHO GNT of $\geq 70\%$ EBF prevalence at a national scale, only three are predicted to meet the target in all their district-level units by 2030.

3. Professor Bo Sin Tang, Dr Kenneth Tang and Mr Kenneth Wong

- have published the following article:

Tang, B. S., Wong, K. K. H., Tang, K. S. S., & Wong, S. W. (2021). Walking accessibility to neighbourhood open space in a multi-level urban environment of Hong Kong. *Environment and Planning B: Urban Analytics and City Science*, 48(5), 1340-1356. DOI: <https://doi.org/10.1177/2399808320932575>

Abstract: *This study presents the spatial analysis of walking accessibility to a public facility in a hilly, multi-level urban environment. Our spatial database includes street topography, physical impedances, formal crossings, and designated access points in assessing the network distance of all private residential buildings to public open space in Hong Kong. Pedestrian movement of uneven speed on walkways of varying gradients is assessed. The study concludes that, compared with our method, conventional buffer analysis and network distance analysis over-estimate the walking accessibility of private housing to neighbourhood open space in Hong Kong by about 2–8%. Despite Hong Kong's compact built environment, about 15% of the total number of residential blocks cannot reach a neighbourhood open space within 5 minutes of walking (equivalent to the local planning standard of 400 metres of walking on a flat terrain). These open space-deficient neighbourhoods comprise mostly the affluent or middle-class households in gated housing estates and in low-rise housing, but also some neighbourhoods of underprivileged families in old urban tenement buildings. Our assessment reveals the spatial bias of land use planning policy leading to these blackspots of open space shortfall in the territory. It requires urban planners to pay attention to the geographical barriers of a pedestrian network in redressing the inequitable distribution and achieving a pedestrian-friendly 3D city.*

4. Professor Anthony Yeh

- has published the following co-authored paper:

Zhou, X. & **Yeh, A. G. O.** (2021). Understanding the modifiable areal unit problem and identifying appropriate spatial unit in jobs-housing balance and employment self-containment using big data. *Transportation* 48(3), 1267-1283. DOI: <https://doi.org/10.1007/s11116-020-10094-z>

Abstract: *Jobs-housing balance (JHB) and employment self-containment (ESC) have been used to examine the jobs-housing relationship. However, the effect of the modifiable areal unit problem (MAUP) on ESC and JHB has received little attention. This study aims to examine the effect of the MAUP on the spatial variation of ESC and JHB by utilizing mobile positioning data from Shenzhen, China. Journey-to-work trips are examined at the individual level and then aggregated into different spatial areal units. It is found that the average ESC increases with the increase in spatial areal units and that the relationship between JHB and ESC is amplified when the spatial areal unit increases with spatial aggregation. A 2 km grid is found to be an ideal spatial unit for the analysis of ESC in Shenzhen because it is the turning point in which the increase in ESC started to slow down, and the decrease in the coefficient of variation began to diminish. In addition, workers were more likely to commute by non-motorized transport modes when their jobs were within 2 km. This study helps elucidate the effect of the MAUP on ESC and JHB as well as determine the appropriate grid size for analysis. This study further suggests that the ideal spatial unit for the analysis of ESC and JHB may be related to the transport mode of the city under study.*

Keywords: *MAUP, mobile positioning data, employment self-containment, jobs-housing balance, work trips*

5. Dr Jiangping Zhou

- his research project entitled 'Revisiting Our Conceptualization of and Metrics for Cities: Constructing, Sharing and Exploiting a Multi-source Database for Hong Kong amid and post COVID-19' has been approved by the University Research Committee to receive a Platform Technology Funding grant of 2021/22, at the amount of HK\$870,000.

Project statement: *COVID-19 rings the alarm of public health risk in the urban environment. Many risk-averse mindsets and behaviours can persist amid and post COVID-19. This would profoundly change how people work, reside, play, learn, interact, where, and when, which in turn challenges much of our existing wisdom and management of cities, e.g., centre vs. peripheral, offline vs. online, and agglomeration vs. specialisation. The 'new normal' requires revolutionised understandings of the (urban) world amid and post COVID-19, especially: (a) how different people adapt across locales (including facilities therein and nearby), which are connected to one another by various infrastructures (e.g., metro, streets, and highways) and enjoy different degree of network attributes (e.g., centrality and betweenness) and amenities (e.g., parks and quality schools), (b) how they (re)value and utilise different locales, and (c) how we can better analyse, price and/or operate cities in light of (a) and (b). This funded project aims to address (a) to (b) by identifying (new) concepts and metrics concerning cities amid and post COVID-19, by establishing a multi-source,*

scalable, sharable, and cloud-based database in light of those concepts and metrics, and by engaging different people to capitalise the usefulness of the database via a web-based platform and to develop/exploit (new) analytics to make sense of various data, which would inform more and more evidence-based and data-powered decision-making across all walks of life in cities, i.e., help us address (c).

- has published the following co-authored papers:

(i) **Zhou, J., Wu, J., & Cheng, R.** (2021). Visualizing Hong Kong's mass transit usage under COVID-19. *Regional Studies, Regional Science* 8(1), 178-183. DOI: <https://doi.org/10.1080/21681376.2021.1924849>

Abstract: *The COVID-19 pandemic hit the world hard. It has induced many abrupt changes, including lockdowns and business closures. Using changes in local public transit usage as proxies of mobility patterns in a typical high-density city where public transit carries $\geq 90\%$ of passenger trips, this featured graphic geovisualizes to what degree human mobility patterns in Hong Kong were affected by the pandemic and related local and remote events such as the Wuhan lockdown and the Hong Kong government's 'work from home' policy, where the patterns are affected the most, and possibly by/after which event(s). The visuals show that trips to and from business and commercial districts, low- to middle-income new towns, and station areas near the checking point serving cross-border visitors/residents might be most affected.*

(ii) **Xiao, L., Lo, S., Liu, J., & Zhou, J.** (2021). Paying for travel distance and time saving: Transit fare and benefit mismatch and its justice implications. *Journal of Urban Planning and Development*, 147(3), 04021040. DOI: [https://doi.org/10.1061/\(ASCE\)UP.1943-5444.0000738](https://doi.org/10.1061/(ASCE)UP.1943-5444.0000738)

Abstract: *Transit fares affect not only whether people are not overburdened with their expenditure on transit services but also whether people can get reasonable benefits from transit services for what they pay. Prevalence of various simplified fare systems and highly differentiated service quality point to a plausible prima facie concern that transit riders suffer from transit fare and benefit mismatch (TFBM), evoking justice concerns and potential impacts on transit usage. This article enriches our understanding of justice implications of transit fares by proposing new metrics and testing them empirically in Hong Kong, where transit dependence is high, that is, a considerable proportion of transit traffic is captive. By considering travel distance and time savings as primary benefits, two indexes are proposed to quantify TFBM. The distributional effects of TFBM on different neighborhood segments are compared and the relationships between spatial or socioeconomic vulnerability, TFBM, and transit usage are explored. Our findings suggest that the transit use ratio of neighborhoods in the peripheral areas of the city is significantly*

influenced by TFBM, while socioeconomically vulnerable neighborhoods are less sensitive to TFBM. Owing to the lack of available alternatives of motorized mode choice, socioeconomically vulnerable neighborhoods face a higher risk of being impaired by TFBM.

(iii) **Zhou, J.**, Ho, S. K., Lei, S., & Pang, V. C. (2021). Population density, activity centres, and pandemic: Visualizing clusters of COVID-19 cases in Hong Kong. *Environment and Planning A: Economy and Space*, Advance online publication (Accepted). DOI: <https://doi.org/10.1177/0308518X211012700>

Abstract: *The impacts of coronavirus disease 2019 (COVID-19) on society and economy are wide-ranging, long-lasting, and global. The experience of multiple countries or regions in fighting the pandemic indicates that there could be multiple COVID-19 surges, where a growing number of cases can be observed in the more recent surge(s). Were COVID-19 cases and clusters of cases (across surges) randomly distributed in spaces? Did population density and activity centres influence clusters of cases and associated venues? Based on information on the associated venues of the four surges of COVID-19 cases between January 2020 and February 2021 as well as population density, visuals were made to distinguish the relationships between population density, activity centres, and clusters of cases in Hong Kong. Different spatial patterns were observed across the four surges: fewer cases were observed in the first surge with a more evenly distributed pattern of clusters; the second surge as compared to the first surge saw a wider distribution and an increase in the number/layer of clusters; compared to the second surge, the third surge suffered from many more cases but saw a decrease in the general number of clusters; and compared to the previous three surges, the fourth surge had the largest number of cases, yet even fewer clusters were observed, where several clusters are again concentrated in specific areas similar to the previous surge. Across the four surges, a few locales could see recurrent clusters of cases and a few communities were without cases.*

Keywords: COVID-19, footprint, population density, activity centres, Hong Kong

(iv) Xiao, L., Lo, S., **Liu, J.**, **Zhou, J.**, & Li, Q. (2021). Nonlinear and synergistic effects of TOD on urban vibrancy: Applying local explanations for gradient boosting decision tree. *Sustainable Cities and Society*, 72, 103063. DOI: <https://doi.org/10.1016/j.scs.2021.103063>

Abstract: *Urban vibrancy can facilitate human activities and social interactions, attract capital and talent, enhance competitiveness and creativity, maintain resilience, and finally achieve a sustainable urban development. Theoretically, transit-oriented development (TOD) is beneficial for vibrancy. In practice, TOD implementation does not always lead to vibrant community life. To foster vibrancy around stations, we need*

to understand relationships between TOD-ness (i.e., the degree to which the current (physical) conditions of station areas meet the standards of TOD) and vibrancy. Empirical studies on this topic are scarce, despite numerous studies on built environment effects on vibrancy. Moreover, these studies are likely to overestimate/underestimate the effects as most of them neglect the pervasive nonlinearity and synergism. This research contributes to the understanding of nonlinear and synergistic effects of TOD on vibrancy by constructing gradient boosting decision tree model using multi-source data from 166 metro station areas in Shenzhen, China. Local explanations for the model indicate the following: (1) Sufficient bus services, horizontal built-up coverage, and mixed-use buildings are dominant contributors to vibrancy around metro stations. (2) TOD have nonlinear influences on vibrancy. (3) Synergistic effects are evident among/within TOD dimensions. Practical implications of the findings, such as targeted policies with nuanced planning/design criteria, are further discussed.

i5 BIM Research Group

i5 BIM Research Group studies the state-of-the-art and cutting-edge R&D contributions of A.I. technologies to Building Information Modelling (BIM) for the delivery of future smart assets. The main research goal of the Group is to simulate virtual representations of real-world assets to enable 'better' decision-making through-life for the Architecture, Engineering, Construction and Operations (AECO) industry. The four cores 'i's are Internationalisation, Innovation, Interdisciplinary and Impact, which realisation is based on the University's vision for 2016-2025: '(3+1)Is: Internationalisation, Innovation and Interdisciplinarity, which converge to create collective Impact.' The fifth, final 'I' is A.I.

Funding/Grant:

1. The Group was again awarded the Innovation and Technology Fund (ITF) from the HKSAR Government via the Technology Start-up Support Scheme for Universities (TSSSU), to commercialise the Llewellyn & Partners Co. Ltd. (LPC) project 'BIM Warehouse'. LPC is an Incu-Tech start-up of the Hong Kong Science and Technology Parks Corporation with a three-year grant starting from August 2020.

Published Refereed Journal/Conference Papers:

1. **Yin, M., Wu, Z., Wen, Y. & Tang, L.** (2020). Visualize GIS, BIM and IOT Data for comprehensive green building parameters monitoring. Proceedings of *the 8th International Conference on Innovative Production and Construction (IPC 2020)* – 'Towards Advancement in Technologies and Processes for Smart Buildings and Construction', 55-64. Hong Kong.
https://www.researchgate.net/publication/351699896_Visualize_GIS_BIM_and_IOT_Data_for_Comprehensive_Green_Building_Parameters_Monitoring
2. **Wen, Y., Tang, L. C. M., & Ho, D. C. W.** (2021). A BIM-based space-oriented solution for hospital facilities management. *Facilities*. Advance online publication. DOI: <https://doi.org/10.1108/f-10-2019-0105>

Invited Talk:

Invited by the Great Bay Area 5G Industry Alliance, together with other ProTech industry leaders, Ir Dr Llewellyn Tang presented on 3 June 2021 his vision for the future of the AEC industry and how HKU LPC's revolutionary R&D digitalisation solutions empower the smart city via ISO 19650 and 5G.



大灣區5G產業聯盟系列研討會

5G+PropTech 邁向地產新天地

2021年6月3日

16:00-17:30

Zoom直播

廣東話

楊孟璋工程師
信和集團創新聯席董事
大灣區5G產業聯盟地產及物管委員會主席

智能物管+5G

16:00-16:15

華懋集團業務轉型及創新之旅

16:15-16:30

胡達明先生
華懋集團業務轉型及創新總監

鄧進明博士工程師
LPC創始人兼首席執行官
港大建築學院建築資訊模型副教授

**房地產數字孿生新基準
- ISO 19650與5G時代**

16:30-16:45

自動化科技與機械人服務

16:45-17:00

張皓程先生
東興自動化投資有限公司副總裁
HandyRehab 聯合創辦人及行政總裁

圓桌會談

17:00-17:30

主持人：詹廷偉先生
香港置地集團公司企業發展部董事及主管

支持單位：

參與方法

掃描二維碼進行登記(RSVP)

Ronald Coase Centre for Property Rights Research

1. Professor K W Chau, Professor Lawrence Lai and Mark Chua

- have published the following paper:

Chau, K., Lai, L. W., & Chua, M. H. (2021). Post-colonial conservation of colonial built heritage in Hong Kong: A statistical analysis of historic building grading. *Environment and Planning B: Urban Analytics and City Science*, Advance online publication. DOI: <https://doi.org/10.1177/23998083211023507>

Abstract: *Based on government appointed specialists' (Antiquities Advisory Board or AAB's) assessments of the heritage value of more than 1,400 heritage items in the Hong Kong Special Administrative Region, we found no evidence of nationalistic bias against British or Japanese built military heritage buildings and structures after the handover of Hong Kong to China in July 1997. We also found no evidence of bias in favour of imperial Chinese architecture in the postcolonial period. Incidentally, we found some evidence that suggests AAB's assessments of heritage value for military heritage buildings and structures have increased while those for imperial Chinese architecture have decreased after 1997, which is somewhat puzzling and merits further investigation. The reasons for the results are discussed in terms of the governance of the AAB as a government appointed committee.*

Keywords: Sustainability, conservation, enemy heritage, probit modelling, decision making

Sustainable High Density Cities Lab

1. Dr Jianxiang Huang and Dr Mengdi Guo

- have received the Third Prize of the Science and Technology Innovation Award of Zhejiang Province.

<https://mp.weixin.qq.com/s/ph5cEBumTCT3DBocJcpVUw>

Hong, T.; Huang, J.; Qiu, J.; Wang, J.; Fan, J.; Liu, H.; Guo, M. Smart Technologies for Sub-Tropical Energy-Saving Neighbourhood Design and Application, Third Prize of the Science and Technology Innovation Award of the Zhejiang Province.

