



THE UNIVERSITY OF HONG KONG 香港大學
faculty of architecture 建築學院



Department of Urban Planning and Design
城市規劃及設計系

Centre of Urban Studies and Urban Planning
城市研究及城市規劃中心



HKURBAN labs

Overview on Research and Teaching



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Introduction 簡介

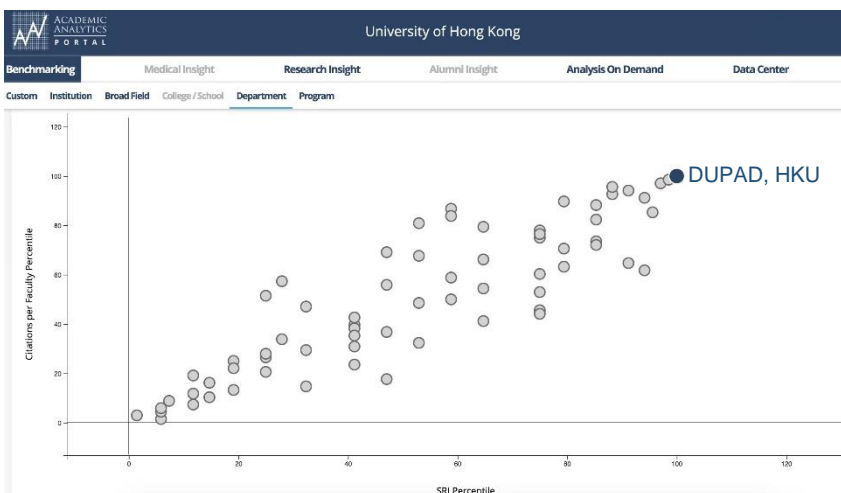
The Department of Urban Planning and Design (DUPAD) was established within the Faculty of Architecture, following the reorganization of the Centre of Urban Planning and Environmental Management (CUPEM) on 1 July 2008 to continue the teaching of urban planning and related areas in housing management and transport which can be dated back to 1980. The Centre of Urban Studies and Urban Planning (CUSUP), which was established in 1980 and renamed as CUPEM in 1991, was re-established to continue interdisciplinary research in urban studies and planning.

With a vision to become a globally recognized planning school, DUPAD strives for excellence in teaching and research in urban studies and urban science, aiming to reshape urban planning and urban governance in Hong Kong, Mainland China, the Belt and Road Region and beyond through world-class urban research and policy analytics. DUPAD offers a range of taught post-graduate programmes, MPhil and PhD programmes in Urban Planning, Urban Design, Housing Management, Urban Design and Transport, and Transport Policy and Planning.

Staff members of DUPAD are active researchers on prevailing issues related to urban and regional development in the global, regional and local contexts. Their main research focus is on temporal and spatial issues of sustainable development in Hong Kong and the Greater Bay Area. With a primary focus on temporal and spatial aspects of sustainable development in high-rise and high-density cities like Hong Kong and other cities in China and Asia, our research programs aim to enhance and expand our knowledge and understanding of sustainable development issues. The findings from our research are published locally and internationally, contributing to intellectual and professional debates and informing policymaking.

The Department of Urban Planning and Design has been ranked as the top institution in comparison with all planning schools in the US, based on the number of citations per faculty, according to the results generated by Academic Analytics (see Figure 1). Staff of DUPAD play an active role in a wide range of government boards and committees related to urban planning and design, urban redevelopment, housing, and transport. They are also actively involved in professional institutes and the private sector, contributing their expertise to the fields of urban design and property management.

Figure 1. Number of Citations per Faculty



城市規劃與設計系(DUPAD)的前身為城市規劃與環境管理中心(CUPEM)，早於 1980 年已經開展城市規劃以及房屋管理和交通規劃等相關領域的教學工作，在 2008 年 7 月 1 日 CUPEM 機構重組之際，DUPAD 於建築學院正式成立。城市研究和城市規劃中心(CUSUP)，早於 1980 年創建，在 1991 年一度更名為 CUPEM，目前已重組，致力於推進城市研究和規劃的跨學科研究。

DUPAD 以成為全球領先的規劃學院為願景，致力於城市研究和城市科學的頂尖教研，旨在通過世界一流的城市研究和政策分析，重塑香港、中國內地、一帶一路地區乃至全球城市規劃和城市治理。DUPAD 提供一系列碩士課程、哲學碩士 (MPhil) 和博士 (PhD) 課程，涵蓋城市規劃、城市設計、房屋管理、城市設計與交通，以及交通政策與規劃等領域。

DUPAD 的教職員工活躍於研究全球、區域和本土的城市和區域發展相關課題，研究重點是香港和大灣區可持續發展的時空問題。目前聚焦於從時空角度研究香港、中國內地及亞洲其他高樓層、高密度城市的可持續發展，旨在加強和擴展對可持續發展問題的認知和理解。大量學術成果在本土和國際均廣為發表，豐富了學術研討的同時，也對政策制定產生影響。

Academic Analytics 最新資料顯示，就學者平均引用率而言，DUPAD 高於所有美國的規劃學院(詳見 Figure 1)。我們的教職員工還出任於城市規劃和設計、城市更新、房屋和交通相關的各類政府委員會，專業學會乃至私營部門，以專業知識服務於城市設計和物業管理領域。



Our Mission 我們的使命

- To provide high-quality professional training in urban planning, urban design, urban and housing studies, and transport to serve Hong Kong and the wider region through vigorous and forefront research and interdisciplinary, theoretical, practical and community-based teaching;
- To inform local, Chinese and Asian practices through critical engagement with urban theories/debates and to (re)conceptualize these evolving practices to inform urban scholars in the world;
- To contribute to a better understanding of sustainable urban development issues through cutting-edge research in the high-density environments of Hong Kong, Mainland China and Asia;
- To nurture professionals in the urban field who are committed to promoting sustainable planning and development, social equity and the wellbeing of citizens;
- To serve as a research centre and innovation hub offering academic and professional leadership for urban research grounded in active professional practices in the Asian context.



- 以充滿活力且位居前沿的研究，跨學科，理論與實踐並重且基於社區的教學活動，為香港及更廣泛地區提供高品質的城市規劃、城市設計、城市和房屋研究以及交通等專業訓練；
- 批判性地參與城市理論建構/辯論，賦能本土、中國內地乃至亞洲的專業實踐，並重新概念化這些持續演化的實踐，進而豐富全球城市學者的知識；
- 通過對香港、中國內地乃至亞洲高密度環境的前沿研究，提升對城市可持續發展問題的深入瞭解；
- 培養城市領域的專才，令其投身於促進可持續規劃和發展、社會公平和市民福祉；
- 作為研究中心和創新樞紐，在學術和實踐上引領根植於亞洲專業實踐的城市研究。



Research Areas & Labs 研究領域與實驗室

In addition to DUPAD, CUSUP fosters interdisciplinary research in urban studies and planning at the University of Hong Kong. It serves as a platform for interdisciplinary research, providing a forum for academics, practitioners and the community to exchange views on urban studies and urban planning. CUSUP undertakes contract research for both public and private sectors, organizes seminars, conferences, and workshops and publishes working papers and monographs.

CUSUP also promotes inter-institutional, regional and international cooperation in urban studies and urban planning. It serves as the home base for *One Belt and One Road Urban Observatory (OBORobs)* and the founding member of *Asian Planning Schools Association (APSA)* and *The Asia-Pacific Network for Housing Research (APNHR)*.

As the oldest urban research unit under the Faculty of Architecture, CUSUP supports the Faculty- and University-wide initiatives for innovative, impactful and path-breaking research on grand urban challenges, such as those on climate, urban resilience and planetary health, urban analytics and smart cities, housing and social development, transport, city and society, and urban and regional development in China and beyond.

除 DUPAD 以外我們還有 CUSUP，專注於在香港大學範圍內開展城市研究和規劃的跨學科研究。作為跨學科研究的平台，CUSUP 為學者、執業者和社區提供一個就城市研究和城市規劃展開交流的論壇。CUSUP 還承接政府和私營部門的研究項目，組織召開各類大型會議、研討會和工作坊，並出版工作論文和專著。

CUSUP 亦促進城市研究和城市規劃跨機構、區域和國際間的合作，既是“一帶一路城市觀察站”的基地，也是亞洲規劃院校協會和亞太住房研究網絡的創始成員。

作為建築學院歷史最悠久的城市研究單位，CUSUP 為學院和大學提供重要的支撐，以具影響力和開創性的研究應對重大城市挑戰，包括氣候、城市復原力和星球健康、城市分析和智慧城市、住房和社會發展、交通、城市和社會、以及中國乃至全球城市和區域發展。

Key Research Areas 主要研究領域

Climate, Urban Resilience and Planetary Health

**氣候、城市復原力及
星球健康**

Urban and Regional Development

城市及區域發展

Urban Analytics and Smart Cities

城市分析及智慧城市

Transport, City and Society

交通、城市及社會

Housing and Social Development

住房及社會發展

Research Networks 研究網絡

DUPAD is also involved in a number of research networks and HKUrban Labs, including but not limited to:

- Asian Planning Schools Association (APSA)
- The Asia-Pacific Network for Housing Research (APNHR)
- One Belt and One Road Urban Observatory (OBORobs)
- Healthy High Density Cities Lab (Healthy^{HD}Cities)
- Social Infrastructure for Equity and Wellbeing (SIEW) Lab
- Sustainable High Density Cities Lab (Sustainable^{HD}Cities)
- Urban Analytics and Interventions Research Lab

DUPAD 還參與了多個研究網絡和 HKUrban 研究室，其中包括但不限於：

- 亞洲規劃學校協會
- 亞太住房研究網絡
- 一帶一路城市觀察站
- 健康高密度城市實驗室
- 促進公平和福祉的社會基礎設施實驗室
- 可持續高密度城市實驗室
- 城市分析和干預研究實驗室

Awards & Recognitions 獎項與認可

Prestigious Fellowship 傑出學者獎

- Professor Rebecca L.H. Chiu, **Fellow of Academy of Social Sciences (FACSS)**
趙麗霞教授，英國社會科學院院士
- Professor Shenjing He, **Fellow of Academy of Social Sciences (FACSS)**
何深靜教授，英國社會科學院院士 (FACSS)
- Professor Bo-sin Tang, **Fellow of Academy of Social Sciences (FACSS)**
鄧寶善教授，英國社會科學院院士 (FACSS)
- Professor Anthony Yeh, **Member of Chinese Academy of Sciences (CAS); Fellow of Royal Institution of Chartered Surveyors (FRICS); Member of Hong Kong Academy of Sciences (HKAS); Fellow of Academy of Social Sciences (FACSS); Fellow of the World Academy of Sciences (TWAS)**
葉嘉安教授，中國科學院院士；皇家特許測量師學會院士；香港科學院院士 (HKAS)；社會科學院院士；世界科學院院士

Research Achievements 研究成果

HKU's Top 1% Scientists, Clarivate Analytics' Essential Science Indicators (2023):

- Professor Shenjing He 何深靜教授
- Professor Anthony Yeh 葉嘉安教授
- Professor Jiangping Zhou 周江評教授
- Dr Chinmoy Sarkar
- Dr Xingjian Liu 劉行健博士
- Dr Xiaohu Zhang 張嘯虎博士

Top 2% Scientists, Stanford University (2023):

- Professor Shenjing He 何深靜教授
- Professor Anthony Yeh 葉嘉安教授
- Professor Jiangping Zhou 周江評教授
- Dr Xingjian Liu 劉行健博士
- Dr Jun Ma 馬駿博士

HKU-100 Scholar, The University of Hong Kong:

- Dr Alec Kirkley (2022)
- Dr Tianren Yang 楊天人博士 (2021)

Meeting of Minds:

- Dr Zhan Zhao 趙展博士 (2019)

Royal Town Planning Institute (RTPI) Awards for Research Excellence

皇家城市規劃學會 (RTPI) 研究卓越獎:

- Dr Chinmoy Sarkar, Academic Award (Winner), 2019
- Dr Guibo Sun and Dr Xiaohu Zhang, Early Career Academic Award with commendation for the highest scoring entry across all categories, 2019
- Dr Chinmoy Sarkar and Dr Xiaohu Zhang et al, Academic Award (Commended), 2016
- Professor Bo-sin Tang et al, Academic Award (Commended), 2015
- Dr Chinmoy Sarkar, The RTPI Awards for Planning Excellence (Winner), 2014

Distinguished Service Award, International Association for China Planning (IACP)

國際中國規劃學會 (IACP) 傑出服務獎:

- Dr Weifeng Li 李衛鋒博士 (2018)
- Professor Jiangping Zhou 周江評教授 (2015)

Other Significant Achievements 其他重要成就

- Professor Shenjing He, Highly Cited Chinese Researchers (Social Science), Elsevier, 2015-2020
- Dr Chinmoy Sarkar, Honorary Member, Department of Psychiatry, University of Oxford, 2022-2025; National Academy of Medicine International Fellow in Global Health Leadership, National Academy of Medicine, Washington DC, 2019-2023
- Dr Tianren Yang, Emerging Scholar Award, Regional Development & Planning Specialty Group, American Association of Geographers, 2022
- Professor Jiangping Zhou, Excellent Paper, World Transport Convention, 2018

Note: Only selected awards and achievements are listed

備註: 僅列出部分獎項和成就

Undergraduate/Postgraduate Programmes 課程

Bachelor of Arts in Urban Studies 文學士(城市研究)學位

4 Years full-time 全日制四年課程

Full recognition by 獲得以下機構認可:

- Hong Kong Institute of Surveyors (HKIS) in the Planning and Development Division
香港測量師學會 (HKIS) 規劃及發展組
- Royal Institution of Chartered Surveyors (RICS)
皇家特許測量師學會 (RICS)

Master of Science in Urban Planning 城市規劃碩士學位

Urban Planning Stream 城市規劃專業 (2 Years full time 全日制兩年課程)

Full recognition by 獲得以下機構認可:

- The Royal Town Planning Institute (RTPI)
皇家城市規劃學會
- The Hong Kong Institute of Planning (HKIP)
香港規劃師學會
- The Chartered Institute of Logistics and Transport (CILTHK) (transport specialism)
香港運輸物流學會

Urban and Regional Planning Stream 城市與區域規劃專業

- 2 Years full time 全日制兩年課程
- Admission of students to be started from 2024/25 將由2024/25學年度開始招生

Provisional recognition (pending) by 獲得以下機構臨時認可 (待定):

- The Hong Kong Institute of Planning (HKIP)
香港規劃師學會

Master of Science in Urban Analytics 城市分析碩士學位

1 Year full time 全日制一年課程

- UGC Targeted Taught Postgraduate Programmes Fellowships Scheme
大學教育資助委員會指定研究院修課課程獎學金計劃
- Recognition as a specialism programme by The Royal Town Planning Institute (RTPI)
皇家城市規劃學會認可為特殊專業課程

Master of Science in Urban Design and Transport

城市設計與交通碩士學位

2 Years full time 全日制兩年課程

Full recognition by (Provisional) 獲得以下機構臨時認可:

- The Chartered Institute of Logistics and Transport (CILTHK) (transport specialism)
香港運輸物流學會

Master of Urban Design 城市設計碩士學位

1 Year full time 全日制一年課程

- Recognition as a specialism programme by The Royal Town Planning Institute (RTPI)
皇家城市規劃學會認可為專業課程
- Full recognition by The Hong Kong Institute of Urban Design (HKIUD)
香港城市設計學會認可

Master of Urban Studies and Housing Management

城市研究與房屋管理碩士學位

Housing Management Professional stream 房屋管理專業

1 Year full time / 2 Years part time 全日制一年/兼讀制兩年課程

Full recognition by 獲得以下機構的認可:

- The Chartered Institute of Housing (CIH)
特許房屋經理學會
- The Hong Kong Institute of Housing (HKIH)
香港房屋經理學會

Urban Studies Stream 城市研究專業

1 Year full time 全日制一年課程

Master of Arts in Transport Policy and Planning

交通政策與規劃文學碩士學位

1 Year full time / 2 Years or 3 Years part time 全日制一年/兼讀制兩年或三年課程

- Jointly offered by the Department of Urban Planning and Design, the Department of Geography and the Department of Civil Engineering
由城市規劃與設計系、地理系和土木工程系聯合教學
- UGC Targeted Taught Postgraduate Programmes Fellowships Scheme
大學教育資助委員會指定研究院修課課程獎學金計劃

Full recognition by 獲得以下機構的認可:

- The Chartered Institute of Logistics and Transport (CILTHK) (transport specialism)
特許物流與運輸學會 (交通專業)
- The Royal Town Planning Institute (RTPI)
皇家城市規劃學會

Master of Philosophy (MPhil) 哲學碩士

Doctor of Philosophy (PhD) 哲學博士

Major research expertise within the Department includes but is not limited to the following:

- Urban and regional development and governance
- Spatial economy and planning
- Transport studies
- Urban analytics and smart cities
- Housing studies
- Healthy cities
- Urban environmental studies



He, Shenjing 何深靜

Head of Department and Professor
BSc, MSc (Nanjing)
PhD (Southampton), FAcSS
Lady Edith Kotewall Professor in
the Built Environment

During the past two decades, Professor Shenjing He has devoted herself to the better understanding of the intersections between housing, healthcare and education in Chinese cities and examining their interactive dynamics and implications on social equality and wellbeing.

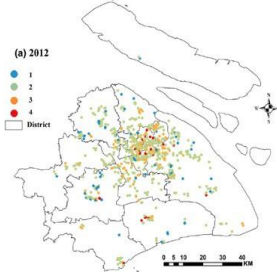
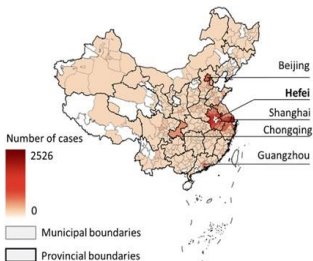
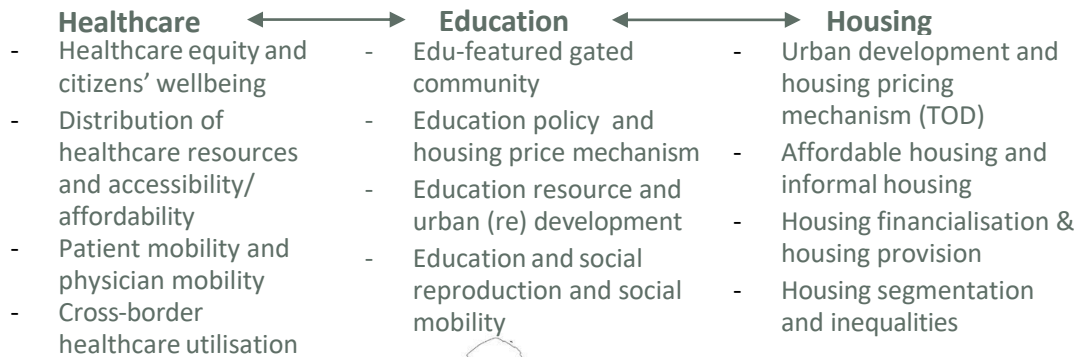
In 2021, she established the Social Infrastructure for Equity and Wellbeing (SIEW) Lab to probe into the long-lasting and deep-seated problems of uneven provision of and unequal accessibility to major urban social infrastructure, with an ultimate interest in improving opportunity, equity and wellbeing among urban citizens. Professor He was conferred the award of Fellow of the Academy of Social Sciences (FAcSS) in 2021. She serves as co-Editor-in-Chief for *Area Development Policy* and Editor for *Urban Studies* and sits on the editorial board of several urban and geographical journals. She was listed as HKU Scholar in the Top 1% (2016-2023), and was one of the most cited social scientists in China by Elsevier (2015-2020). According to 2023 Stanford University's Top 2% Scientists database, Professor He is among the top 0.15% of all researchers, ranked 5th in China and 80th worldwide (Career Impact 1960- 2022) and 1st in China and 22nd worldwide for a single year (2022) in the field of Urban and Regional Planning.

Key Research Areas:

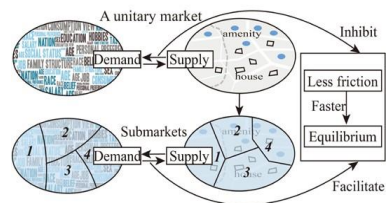
- Urban Redevelopment/ Gentrification
- Mobility and Entrepreneurial Urbanism
- Low-income Housing
- Urban Development and Housing Price Mechanism
- Urban Governance
- Rural-Urban Integration
- Health and the City

Highlighted Research:

Social Infrastructure for Equity and Wellbeing (SIEW Lab)



The role in supply-demand matching



在過去的二十年，何深靜教授致力於研究中國城市住房、醫療和教育交叉領域及其對社會平等和福祉的影響。2021年，何教授創立了SIEW實驗室，旨在探討城市社會基礎設施配置不均衡和可達性不平等這些根深蒂固的問題，聚焦於提高城市居民的機會、平等和福祉。何教授在2021年當選FAcSS。她目前擔任*Area Development Policy*的共同主編、*Urban Studies*編輯，並擔任多本城市 and 地理學期刊的國際編委。根據ESI指數，她被列為頂尖1%學者（2016-2023）和Elsevier評選的高引用量中國社會科學家（2015-2020）。根據2023年斯坦福大學的「全球前2%科學家」數據庫，何教授名列頂尖0.15%學者，在城市與區域規劃領域多個排名領先。



Yeh, Anthony G.O. 葉嘉安

Chair Professor (Urban Planning and GIS)
 BA (HKU), MSc. (Asian Inst Tech),
 MRP, PhD (Syracuse)
 FHKIP, FRTPI, FPIA, FCILT, FRICS, RPP, Member
 of CAS, HKAS, FacSS, Fellow of TWAS
 Chan To Haan Professor in Urban Planning
 and Design

Key Research Areas:

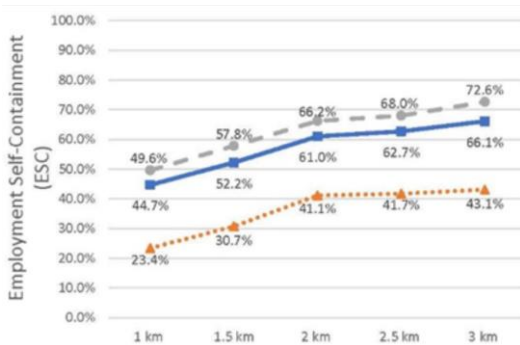
- Land Use Planning
- Urban Renewal
- New Towns
- Geographic Information Systems
- Transport and Big Data
- Smart Cities
- Urban Planning and Development in Hong Kong and China and S.E. Asia

Professor Yeh is the Chan To Haan Professor in Urban Planning and Design and a member of the editorial board of *Computers, Environment and Urban System*, *Transactions in GIS*, *Progress in Planning*, *International Planning Studies*, *Environment and Planning B* and other international journals. He has been invited to participate in many expert group meetings on master plans of Chinese cities, such as Guangzhou, Zhuhai, Shenzhen, and Hangzhou.

Highlighted Research:

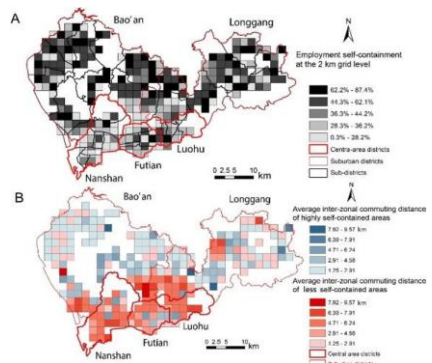
Self-Containment of Employment Job, Housing Balance Using Big Data

Average Employment Self-Containment at Different Scales



Transportation. 2021; 48: 1267–1283

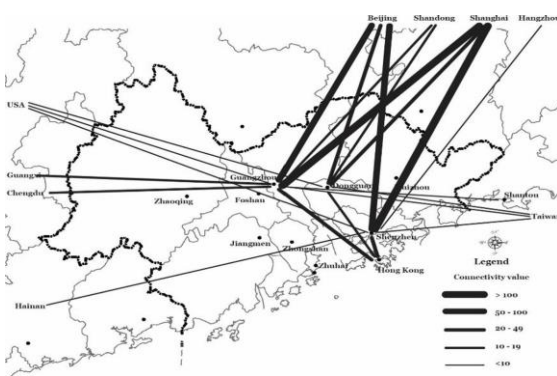
Average Employment Self-Containment at 2 sq km



Transportation. 2021; 48: 1267–1283

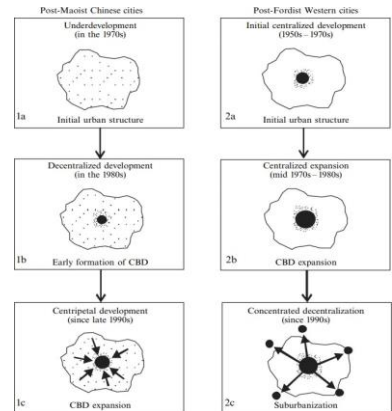
Producer Services Study

Intra-Firm Office Networks of Producer Services beyond the PRD



Urban Studies. 2015; 52(13): 2458-2482

Intraurban Locations of Producer Services



Environment and Planning A. 2011; 43: 28-47

葉嘉安教授是陳道涵基金教授(城市規劃及設計)。主要研究方向為地理信息系統在城市及區域規劃中的應用，以及智慧城市和香港、中國及東南亞國家的城市規劃與發展。他於 2003 年當選中國科學院院士，於 2010 年當選發展中世界科學院院士，2013 年當選英國社會科學院院士，並於 2019 年當選香港科學院院士。葉教授同時也是 *Computers, Environment and Urban System*、*Transactions in GIS*、*Progress in Planning*、*International Planning Studies* 等國際期刊的編輯委員會成員。他曾獲邀參與廣州、珠海、深圳和杭州等中國城市的總體規劃專家組會議。



Zhou, Jiangping 周江評

Professor

BEng (TJU), MEng (NJU), MS (Illinois)

PhD (USC)

CMILT

Key Research Areas:

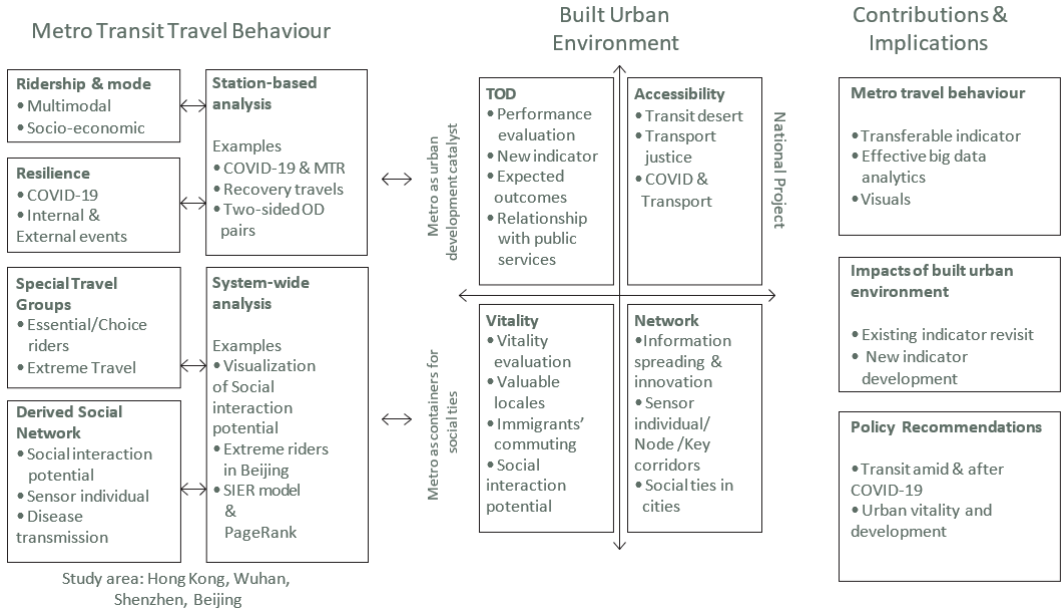
- Sustainability
- Transport
- Land Use and Development

Professor Zhou’s research focuses on transport/transit systems and land use connections and how to problematize and improve the performance of these connections. He often exploits big and/or open data and mixed-method approaches in his research. He has 100+ publications in top peer-reviewed multidisciplinary or specialist journals such as Proceedings of National Academy of Sciences of the United States of America, Urban Studies, and Journal of American Planning Association. He was ranked by Clarivate Analytics in the top 1% worldwide by citations in 2022 and 2023. Professor Zhou’s research output and efforts helped him win impactful appointments in academia and beyond. He is associate editor for Travel Behaviour and Society (Elsevier), Urban Rail Transit (Springer) and Transactions in Urban Data, Science and Technology (Sage). He is on seven editorial board of refereed journals such as Journal of Public Transportation and Urban Transport of China.

Highlighted Research:

Metro Travel Behaviour & Urban Built Environment

Adaptions to abrupt changes: Indicators for public transportation travel amid COVID-19



周江評教授專注於利用大數據，開放數據以及混合方法，進行交通/運輸系統和土地利用連接性問題以及改善連接性的研究。他在國家科學院院報、城市研究和美國規劃協會雜誌等頂級同行評議的多學科或專業期刊上發表了 100 多篇文章。他在 2022 和 2023 連續兩年被 Clarivate Analytics 評為全球引用率前 1%的學者。周教授的研究成果為他在學術界和其他領域贏得影響力。他是 Travel Behaviour and Society (Elsevier), Urban Rail Transit (Springer), Transactions in Urban Data, 和 Science and Technology (Sage)的副主編。也是包括 Journal of Public Transportation 和 Urban Transport of China 在內七本同行評議期刊的編輯委員會成員。



Huang, Jianxiang 黃健翔

Associate Professor
 BArch, March (Tsinghua)
 MCP(MIT), DDes(Harvard)
 LEED AP, AICP

Key Research Areas:

- Urban Design
- Environmental Modelling
- Microclimate
- Urban Energy
- Design for Health

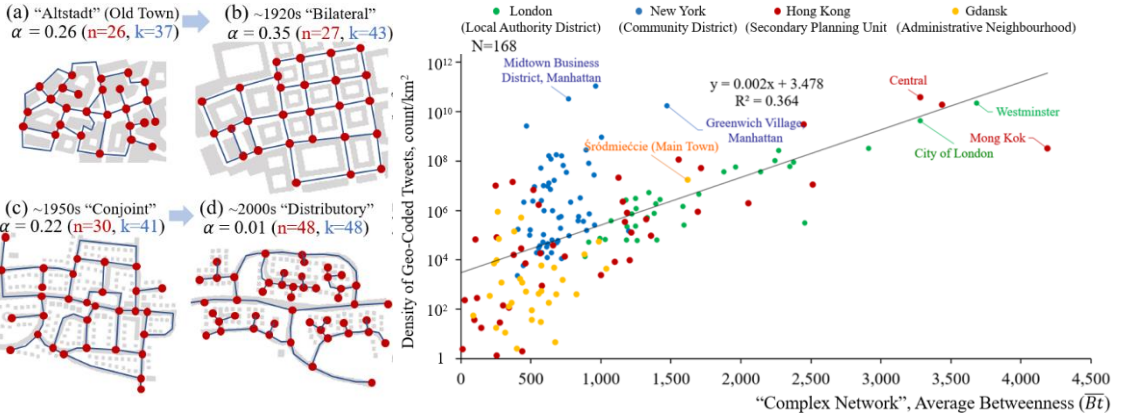
Dr Huang’s research is dedicated to high density city, with particular focus on enhancing its liveability while mitigating the negative impact, such as urban heat island effect, traffic noise, and reduce carbon emissions. He is the director of the Sustainable High-Density Cities Lab, an interdisciplinary research group that develops new theories, innovative thinking, and cutting-edge tools to achieve sustainable urban development. His research includes developing urban environment and energy simulation and optimization models, as well as studying human-built environment interactions using “urban new data” such as social media, POI, behavioural data, and wellbeing. He has developed the City Series design software package which has been applied to real-world projects in Hong Kong, Singapore, mainland China, the US, and other countries.

Highlighted Research:

The City Series of Simulation Models and Software Platform

CityComfort+ (城適) a ray-tracing software for outdoor thermal stress in cities	UrBEC (城能) a software for coupled urban microclimate and building energy performance	CityAir (城氣) a software for urban air pollution and airborne dispersion of respiratory diseases	CityNoise (城喧) a software for urban acoustic environment and human exposure

Human-built environment interactions using “urban new data”



黃博士的研究致力於高密度城市，特別關注提高其活力和宜居性，同時減輕城市熱島效應、交通噪音等負面影響，並減少碳排放。他領導港大的可持續高密度城市實驗室，致力於開發跨學科新理論、創新思維和尖端工具來實現可持續城市的设计和發展。他的研究包括開發城市環境和能源模擬和優化模型，以及利用社交媒體、POI、行為數據和幸福感受「城市新數據」研究人造環境互動。他開發的城市系列設計軟件已應用於香港、中國大陸、新加坡、美國和其他國家的實際項目。



Lau, Mandy H.M. 劉杏雯

Associate Professor

BSc (LSE), MPhil & PhD (Cantab)

Key Research Areas:

- Micro-housing
- Aging cities
- Social Sustainability

Dr Mandy Lau specialises in housing and ageing research. She has led a number of research projects funded by the Research Grants Council of Hong Kong (RGC), including a project on sub-divided rental apartments, and a project on intergenerational relations in high-rise neighbourhoods. Her latest project adopts qualitative methods to explore residents' subjective perceptions of small living spaces.

Dr Lau is currently Asia Editor of *Housing Studies Journal*. She has contributed to a number of contract research projects commissioned by professional institutes and NGOs, including a project on purpose-design housing for lower-middle income older people, commissioned by the Hong Kong Housing Society (HKHS).

Highlighted Research:

Housing Research – Micro-living

Selected housing research publications:

- Lau, M.H.M. (2022) "Speculative sub-division of private rental flats in Hong Kong" in C.Chu and S.He (Eds) *The Speculative City: Emerging Forms and Norms of the Built Environment*, Toronto: University of Toronto Press.
- Lau, M.H.M. (2020) "Community-based housing solutions in Hong Kong: How and why have they emerged?", *International Journal of Housing Policy*, 20(2), pp. 290-301.
- Lau M.H.M. & Wei, X. (2018) "Housing size and housing market dynamics: The case of micro-flats in Hong Kong", *Land Use Policy*, 78, pp. 278-286.

Ageing Research – Intergenerational living

Selected ageing research publications:

- Lau, M.H.M. (2023) "Spatial age segregation: Evidence from a rapidly ageing Asian City", *Journal of Population Ageing*, doi: 10.1007/s12062-023-09416-7.
- Lau, M.H.M. (2023) "Intergenerational interactions, ageism and ableism in community settings", *Journal of Intergenerational Relationships*, doi: 10.1080/15350770.2023.2206387
- Lau, M.H.M. (2023) "Fostering intergenerational interactions in high-rise residential neighbourhoods: Towards culturally-informed interventions?" *Housing Studies*, doi: 10.1080/02673037.2023.2211940.

劉杏雯博士主力研究房屋及老齡化問題，主持了多項由香港研究資助局(RGC)資助的研究項目，研究課題包括「劏房」，高樓層居住環境下的跨代關係。劉博士最新研究為採用定量方法研究居住者對狹小居住環境的主觀感受。劉博士現時是學術期刊 *Housing Studies Journal* 的亞洲區編輯，並曾參與多項由專業學會及非牟利機構委托的研究項目，包括受香港房屋協會委托進行中低收入長者屋居住環境的研究。



Li, Weifeng 李衛鋒

Associate Professor
BSc & BEc & MSc (Peking)
PhD (MIT)

Key Research Areas:

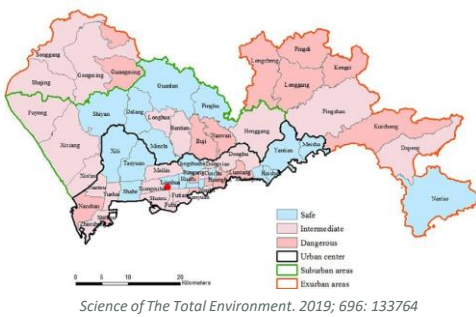
- Environmental Sustainability
- Land-use Transportation Planning Interactions and the Environmental and Energy Impacts
- Climate change and Urban Planning
- The use of GIS and Spatial Analysis in Urban Planning

Dr. Weifeng Li has been working in the Department since 2011 after receiving his Ph.D. From MIT. His research interests focus on environmental sustainability associated with urbanization and transportation, urban spatial structure and air pollution, health effects, and the use of urban modelling, remote sensing, and big data in urban and environmental studies. Dr. Li is a member of the editorial board of *Transportation Research D: Transport and Environment* and *Applied Geography*, Honorary Secretary of buildingSMART International Hong Kong Chapter, and Immediate Past President of the Hong Kong GIS Association. He was an Associate Editor of *Journal of Transport and Land Use* and received International Association for China Planning (IACP) Distinguished Service Award (2018).

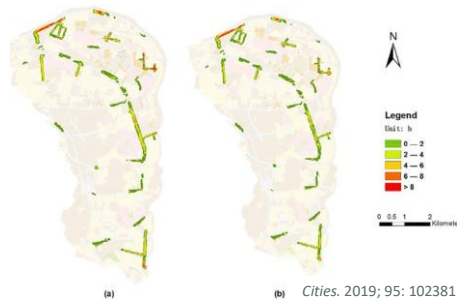
Highlighted Research:

Planning for Resilient Cities in GBA

Vulnerability of spaces to urban flooding in Shenzhen

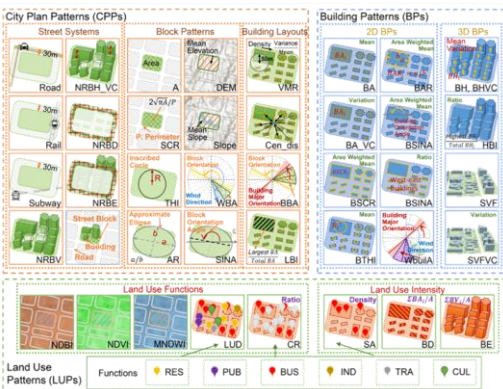


Spatial distributions of recovery durations with (a) and without (b) construction the LID projects

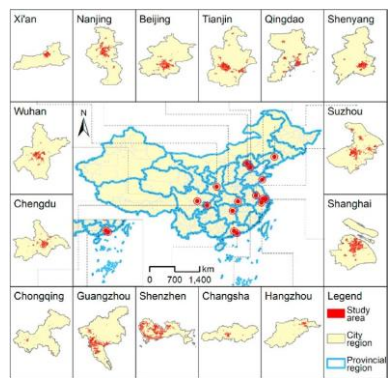


Carbon Neutrality and Neighbourhood Planning

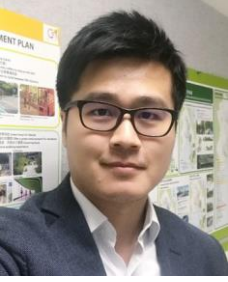
Conceptual Framework of Household Carbon Emissions, Residential Choice and Car Usage



Impact of 3-D Urban Form on Emissions at the Street Block Level in Chinese Cities



李衛鋒博士的主要研究興趣包括都市化和交通相關的環境可持續性，城鎮空間結構與大氣污染及健康效應，以及社區規劃與碳中和。李博士是 *Transportation Research D: Transport and Environment* 和 *Applied Geography* 的編輯委員會成員，香港建設資產及環境信息管理聯盟榮譽秘書長，以及香港地理信息系統學會前任會長。他曾擔任 *Journal of Transport and Land Use* 的副主編，並獲得國際中國規劃學會 (IACP) 傑出服務獎 (2018 年)。



Liu, Xingjian 劉行健

Associate Professor

B.S. (Wuhan), M.S. (Texas State)

PhD (Cambridge)

Key Research Areas:

- *Regional Development*
- *Urban Spatial Structure*
- *City-Regions*

Dr Liu is an associate professor in Department of Urban Planning and Design. He has participated in collaborative studies that examine urban form and city-regions.

Specifically, much of the collaborative work has been following research traditions and assessing urban patterns and spatial structure at multiple geographical scales. Empirically, these studies have often been focusing on Chinese cities and conducted with the assistance of network analysis and spatial models.

More recently, joint studies have been looking into key development projects and intercity transport infrastructure (e.g., airports, development zones, expressways, and new towns) within the context of Chinese city-regions.

Collaborative work has appeared in journals such as *Environment and Planning A/B*, *Journal of Transport Geography*, *Regional Studies*, *Urban Geography*, and *Urban Studies*. Dr Liu is a member of and has conducted collaborative work within the Globalization and World Cities research network.

劉行健博士所參與的合作研究關注不同空間尺度上的城市型態與城市區域。這些實證研究往往聚焦中國城市以及應用網絡與空間分析方法。近期的合作研究則主要探索中國城市區域的重點開發項目以及交通基礎設施（如機場、開發區、高速公路和新城等）。



Nam, Kyung-Min 南更旻

Associate Professor

BSc (Yonsei), MUP (Michigan)

PhD (MIT)

Key Research Areas:

- Economic Geography
- Regional Science
- Spatial Planning & Environmental Policy
- Air Pollution & Climate Change
- Emissions Trading in China and Its Greater Bay Area
- CGE Modelling

Dr Kyung-Min Nam holds a PhD from the Massachusetts Institute of Technology (MIT), and is a research fellow with the HKU Urban Systems Institute, the MIT Joint Program on the Science and Policy of Global Change, and the Seoul National University Spatial Economics Lab. His current research focuses on spatial and environmental policy analysis, taking econometric and computable general equilibrium (CGE) approaches. Dr Nam is currently Associate Editor of the *Annals of Regional Science* (Springer), and serves on the editorial boards of the *International Journal of Urban Sciences* (Taylor & Francis), the *Journal of the Korea Planning Association*, and the *Journal of the Korean Economic and Business Association*.

Highlighted Research:

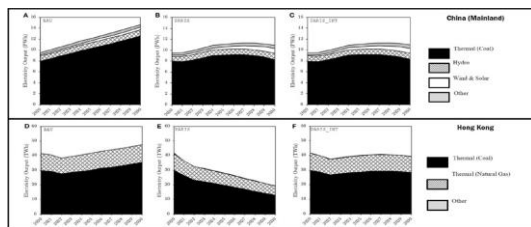
Emissions Trading in the Great Bay Area and China

CHEEM (Mainland China-Hongkong Energy Economic Model) and

GBAEM (China's Greater Bay Area Economic Model)

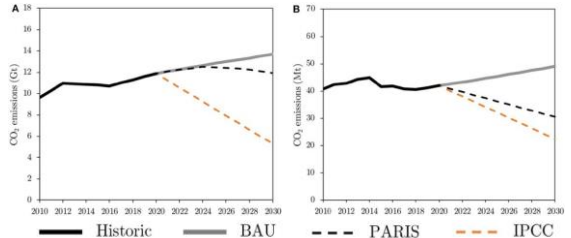
- Multi-region, recursive dynamic CGE models, with 6 regions & 16 sectors
- Can simulate national, regional, and local climate policy scenarios up to 2030 on 1-year interval (CHEEM) and up to 2060 on 5-year interval (GBAEM)

GDP loss under moderate mitigation targets (vs. BAU levels)



Frontiers. Environ. Sc. 2020; 8: 599231

Emission schedule under each scenario



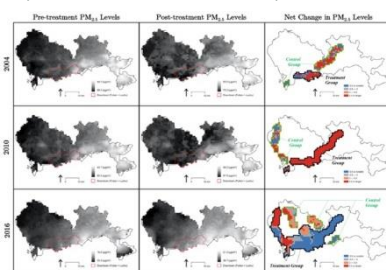
Frontiers. Environ. Sc. 2020; 8: 599231

Market Impacts of Air Pollution

Housing Market Impacts in China and Korea

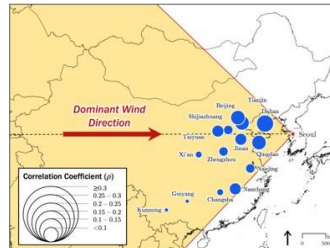
- Two stage least square (2SLS) panel models with spatial lag terms
- Short- and long-range transboundary pollution as instruments

Impacts of Shenzhen's Metro-line Expansion Events



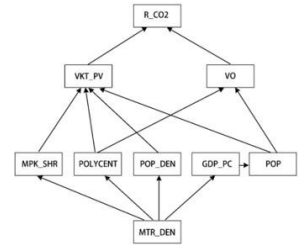
Transportation Research Part D: Transport and Environment, 2023 (forthcoming)

Rationale for Long-range Trans-boundary Pollution Instrumental Variable



Environmental and Resource Economics, 2022; 82: 383-407

Structural Equation Modelling Framework on Rail-driven Traffic Diversion Effect



Atmosphere, 2022; 13(11): 1783

南博士於麻省理工學院獲得博士學位，現任城市規劃與設計系副教授，兼任香港大學城市系統研究院研究員。他同時擔任 MIT 全球變化科學與政策聯合項目及首爾國立大學空間經濟實驗室的客座研究員。南博士其研究興趣聚焦於空間規劃及環境政策，特別是基於計量經濟與可計算一般均衡模型的氣候變化政策、空氣污染法規、和區域融合與產業升級的各種空間政策。南博士目前是 *Annals of Regional Science* 副編輯、*International Journal of Urban Sciences*、大韓國土都市計劃學會專屬期刊《國土計劃》、和韓國經濟通商學會專屬期刊《經濟研究》編委會成員。



Sarkar, Chinmoy

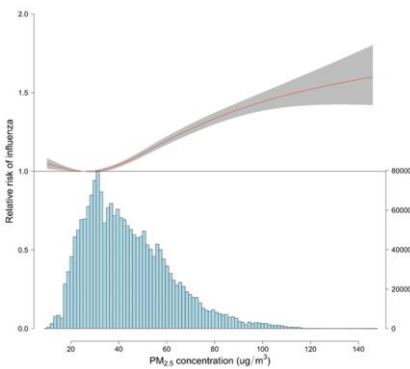
Associate Professor
BSc & MSc(BHU), MPH(HKU)
PhD (CPLAN, Cardiff)

Dr Sarkar is an Associate Professor and also co-leads the *Healthy High-Density Cities Lab*, an HKUrbanLab conducting built environment- health research employing big data, including health cohorts and health surveillance dataset.

His work leverages on the power of data, models, algorithms and smart technologies towards a more nuanced and evidence- based approach to health city science, planning and policy-making for creation of healthy places and cities. He is the concept lead and developer of the UK Biobank Urban Morphometric Platform (UKBUMP), one of the largest individual-level built environment-health exposure databases. Dr Sarkar recently completed international fellowship in Global Health Leadership from US National Academy of Medicine, and is an honorary member of Department of Psychiatry, Oxford University.

Highlighted Research:

Environmental Drivers of Influenza in Guangzhou



Science of The Total Environment. 2021; 826: 154135

Key findings:

Higher exposure to particulate matter (2.5µm) increases risk of influenza.

Urban Density and Health in Hong Kong



PLoS Medicine. 2021; 18(11): e1003824.

Key findings:

Greater residential living space and neighbourhood housing density reduce risk of hypertension, and greater building block level density increases risk of hypertension.

Greater residential living space reduces risk of depression, while greater building block level density elevates risk of depression.

Dr Sarkar 是城市規劃與設計系副教授，亦是健康高密度城市實驗室的主要負責人之一。健康高密度城市實驗室是一個利用大數據進行建築環境健康研究的實驗室，包括健康隊列和健康監測數據集。Sarkar 博士透過運用數據、模型、算法和智能技術，以創建健康的場所和城市。他是英國生物庫城市形態測量平台 (UKBUMP) 的開發者之一，該平台擁有其中一個最大的個體級建築環境健康暴露數據庫。Sarkar 博士曾獲美國國家醫學院全球健康領導力的國際研究員獎金，並且是牛津大學精神病學系的名譽成員。



Connolly, Creighton Paul

Assistant Professor
BA (British Columbia)
MA (Memorial)
PhD (Manchester)

Key Research Areas:

- *Urban Political Ecology*
- *Landscape Participatory*
- *Governance and Planning*
- *Heritage Management*
- *Cities and Infectious Disease*
- *Urban Redevelopment*
- *Politics of Infrastructure*

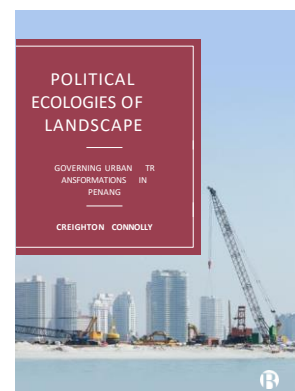
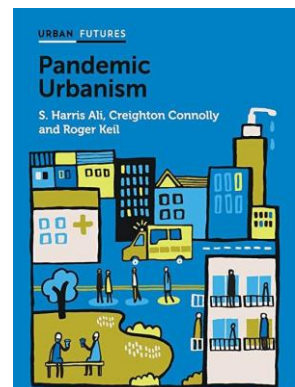
Prior to joining in January 2023, Dr Connolly held faculty positions in the School of Graduate Studies at Lingnan University, Hong Kong (2021-22), and the University of Lincoln, UK (2018-21). He also worked as a postdoctoral fellow at the Asia Research Institute, National University of Singapore (2016- 2018). Trained as an urban political ecologist, his work examines processes of urban and environmental governance, planning and development, focusing on the Southeast Asian region. He is the author of *Political Ecologies of Landscape: Governing Urban Transformations in Penang* (Bristol University Press, 2022) and *Pandemic Urbanism: Infectious Disease on a Planet of Cities* (Polity Press, 2022). Creighton also has a number of articles in journals such as *Environment and Planning A*; *International Journal of Urban and Regional Research (IJURR)* and *Urban Studies*.

Highlighted Research:

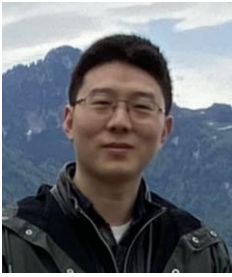
Political Ecologies of Landscape

Where do outbreaks occur and how they relate to the relationship between humans and the environment and between the rural and (sub)urban interface?

- Identifying social and ecological factors affecting infectious disease emergence. Rapidly expanding infrastructure networks and urban landscapes can themselves play a role in the emergence of potential outbreaks.
- Post-pandemic urban governance, focusing on Hong Kong: Identifying vulnerabilities, implications of urban inequalities and density: how to build more resilient, post-pandemic cities?
- How are spaces on the urban periphery bound up with processes of ‘urbanization’?
- Tracing interconnected social, ecological and political processes that are bound up with the transformation of urban space at multiple scales.



在 2023 年 1 月加入之前，Dr Connolly 曾在香港嶺南大學研究生院（2021-2022 年）和英國林肯大學（2018-2021 年）擔任教職。他還曾在新加坡國立大學亞洲研究所擔任博士後研究員（2016-2018 年）。作為城市政治生態學家，他的研究探討城市和環境治理、規劃和發展的過程，尤其關注東南亞地區。他是 *Political Ecologies of Landscape: Governing Urban Transformations in Penang* (Bristol University Press, 2022) 和 *Pandemic Urbanism: Infectious Disease on a Planet of Cities* (Polity Press, 2022) 的作者。Dr Connolly 還在 *Environment and Planning A*; *International Journal of Urban and Regional Research (IJURR)* 和 *Urban Studies* 等期刊上發表了多篇文章。



Feng, Chen 封晨

Assistant Professor

BArch (SJTU)

MEeng (SZU)

PhD (Georgia Tech)

Key Research Areas:

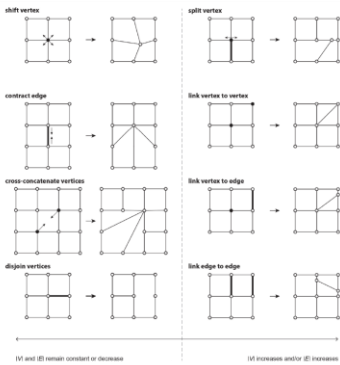
- Space syntax & urban design
- Healthy & climate-friendly cities
- Travel behavior / human mobility
- Urban informatics

Prior to joining the University of Hong Kong, Dr Feng worked as a Researcher and Postdoctoral Fellow in Applied Urban Design at Royal Institute of Technology (KTH) in Sweden (2021–2024) and a Postdoctoral Fellow in Urban Informatics at The University of Texas at Austin (2019–2020). His research interests include urban network analysis, generative urban design, the interaction between urban forms and urban activity patterns, and using emerging technologies such as big data and machine learning to study urban health, shared micromobility, and urban segregation and inequality.

Dr Feng received the King Medal for Excellence in Architectural and Environmental Design Research from the Architectural Research Centers Consortium in 2020. His research was featured in the exhibition catalogue of the Korean Pavilion at the 2016 Venice Biennale and has been published in leading journals in his field, including Environment and Planning B, Journal of Urban Technology, and Computers, Environment and Urban Systems.

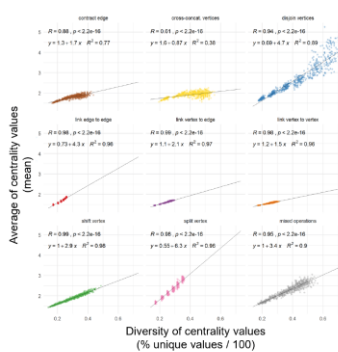
Highlighted Research:

Generative Rules



Environment and Planning B, 49(2), 535–548

Trends Analysis

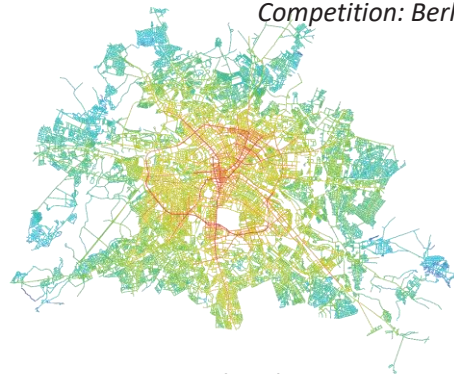


Pathways to creating differentiated grids: Types, benefits and costs

International Urban Design Ideas Competition: Berlin-Brandenburg



Existing Condition



Proposed Condition

封教授於 2021 至 2024 年在瑞典皇家理工学院应用城市设计领域担任研究员和博士后研究员，并於 2019 年至 2020 年在美国德克萨斯大学奥斯汀分校从事城市信息学方面的博士后研究。他拥有乔治亚理工学院建筑与城市设计博士学位。他的研究兴趣包括城市网络分析、生成式城市设计、城市形态和城市活动模式之间的相互作用，以及利用大数据和机器学习等新兴技术研究城市健康、共享微移动、城市隔离以及不公问题。2020 年，封教授获得了建筑研究中心协会颁发的建筑与环境设计研究卓越奖章。他的研究成果曾在 2016 年威尼斯双年展韩国馆展览目录中展示，并发表在领先的学术期刊《环境与规划 B：城市分析和城市科学》、《城市技术杂志》和《计算机、环境与城市系统》等期刊上。



Guo, Cui 郭萃

Assistant Professor
BSc & MSc (SMU)
PhD (CUHK)

Key Research Areas:

- Environmental Health
- Built Environment
- Air Pollution
- Climate Change
- Public Health
- Cohort Study

Dr Guo's research interest mainly lies in Environmental Health, and Biostatistics. She has published more than 60 journal articles in peer-reviewed prestigious journals, including *Circulation*, *Lancet Planetary Health*, *Environmental Health Perspectives*, *eClinicalMedicine*, and *Environment International* as first/corresponding author. Her research enhances governmental guidelines on air pollution control and health improvement as well as helps general population to modify their lifestyle. Cui is also a member of topical advisory panel for *Pollutants*, an editorial board member of *International Journal of Environmental Research and Public Health*, and *Explora: Environment and Resource*, a youth editorial board member of *Journal of Environmental Exposure Assessment*, a guest editor of *Atmosphere*, and a committee member of ISEE and ACSP. She has been awarded the HMRF fellowship (2024). She further constantly serves as a reviewer of several top journals.

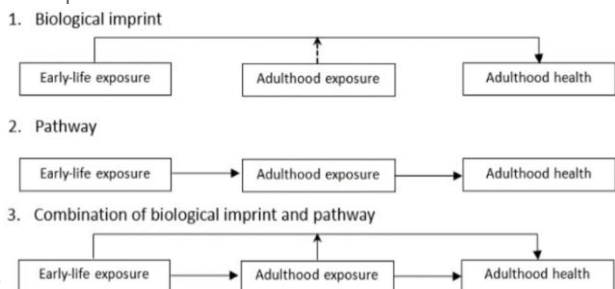
Highlighted Research:

Air Pollution and Chronic Health Conditions in

A recent study in *Circulation* (2020) suggested that long-term exposure to air pollution may have adverse effects on human health, whilst physical activity may reduce the risk of developing chronic diseases. This study found that undertaking outdoor exercise might not aggregate the adverse effects of air pollution exposure on human health.

Life-course Exposure

Three plausible mechanisms for the life-course associations.

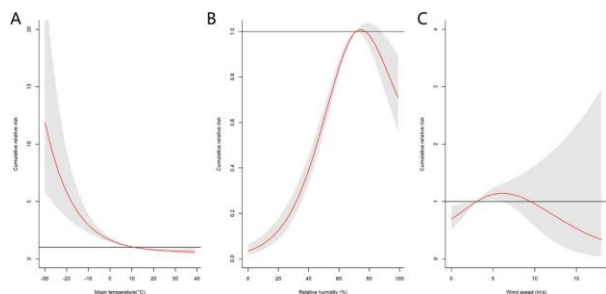


Environmental Science and Pollution Research. 2022; 29:1-0

Climate Change, policy Interventions and Infectious Diseases to Air Pollution

Spatial distribution of COVID-19 cases and meteorological monitoring stations in the world.

Science of the Total Environment. 2021; 757: 143783



郭博士的主要研究領域為環境健康以及生物統計學。郭博士目前發表了 60 多篇 SCI 論文，部分以第一作者或通訊作者發表在 *Circulation*, *Lancet Planetary Health*, *Environmental Health Perspectives*, *eClinicalMedicine* 以及 *Environment International*。她的研究有助於促進空氣品質以及居民健康水平的提高。同時，有助於一般人群改善自己的生活方式。郭博士也是 *Pollutants* 雜誌專題諮詢會的委員，*International Journal of Environmental Research and Public Health* 和 *Explora: Environment and Resource* 的編委會成員，*Explora: Environment and Resource* 的青年編委會成員，*Atmosphere* 雜誌的客座編輯以及 *International Society for Environmental Epidemiology* 和 *Association of Collegiate Schools of Planning* 的委員。郭博士獲得了 2024 年醫療衛生研究基金獎金計畫，也是多個著名期刊的審稿人。



Kirkley, Alec

Assistant Professor

BSc (Rochester)

PhD (Michigan)

Key Research Areas:

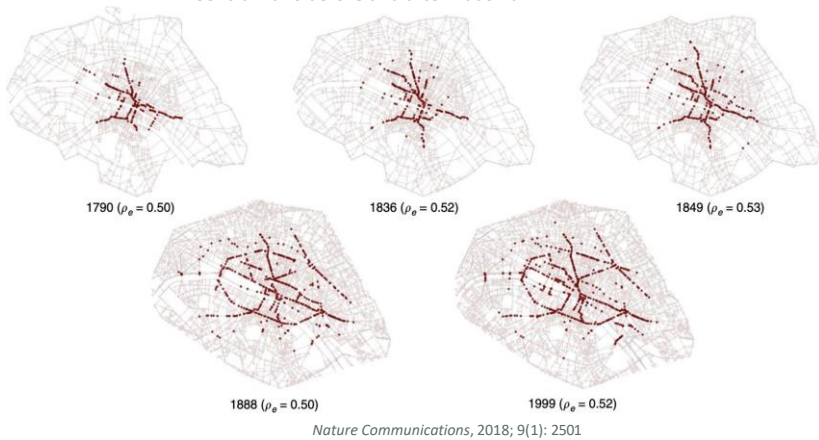
- Theory of Complex Networks
- Statistical Physics of Urban Systems

Dr Kirkley's research aims to understand urban systems through the lens of network science and statistical physics. Specifically, Dr Kirkley aims to use these methods to (1) characterize mobility networks and their impact on city prosperity and resilience, and (2) develop new methods for extracting structural patterns in spatial urban data through a topological lens. Dr Kirkley's work involves a balance of mathematical theory, computer simulation, and analysis of empirical data, and draws on ideas from a range of disciplines including network science, statistical physics, information theory, Bayesian statistics, machine learning, and combinatorics.

Highlighted Research:

Betweenness Centrality in Street Networks

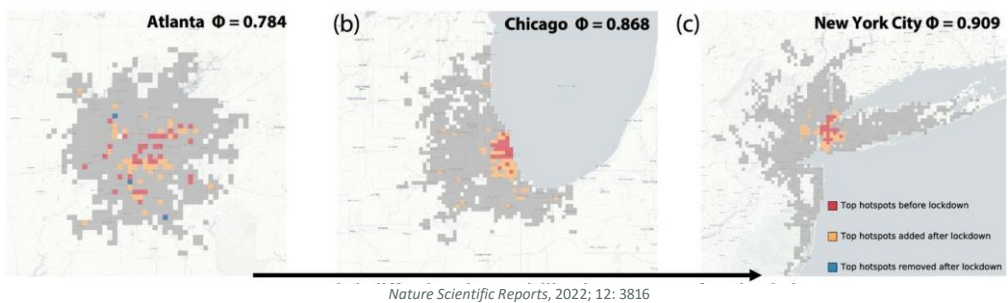
Central Paris before and after Hausmann



Distribution of betweenness (shortest path-based predictor of congestion) invariant across 100 cities worldwide

Also invariant to street rewiring, reweighting (speed limits), but not spatial density of streets or non-planarity

Mobility Hierarchy and COVID-19 Spread



Dr Kirkley 的研究旨在透過網絡科學和統計物理學的視角來理解城市系統，包括描述移動網絡及其對城市繁榮和韌性的影響，以及通過拓撲學的角度開發提取空間城市數據結構模式的新方法。Kirkley 博士的研究涉及數學理論、計算機模擬和實證數據分析的平衡，並借鑒了包括網絡科學、統計物理學、信息論、貝葉斯統計、機器學習和組合學在內的一系列學科的思想。



Ma, Jun 馬駿

Assistant Professor
BEng(HUST), PhD(HKUST)

Key Research Areas:

- Urban Environment
- Sensing and Tools
- Artificial Intelligence

Dr Jun Ma joined DUPAD as an Assistant Professor in August 2020. He received the Ph.D. degree in Civil and Environmental Engineering from the Hong Kong University of Science and Technology (HKUST) in 2016, and the Bachelor of Engineering degree in Mechanical Engineering from the Huazhong University of Science and Technology (HUST) in 2012. Before joining DUPAD, he had founded or co-founded multiple tech companies in mainland China, and had won the championship of Inno-China 2015. He is now working as the associate director of the Master of Urban Analytics (MUA) program in DUPAD.

Highlighted Research:

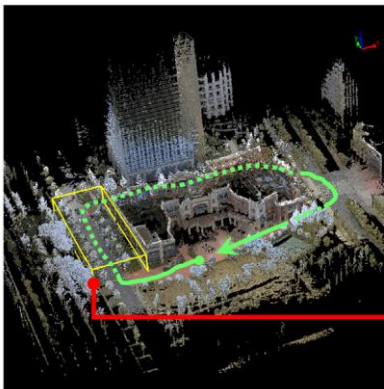
Urban Air Quality

How to effectively and accurately detect or estimate urban scale high resolution air quality (PM, O3, SOx, NOx, COx, CH4)? How the built environment qualitatively affects urban air quality?

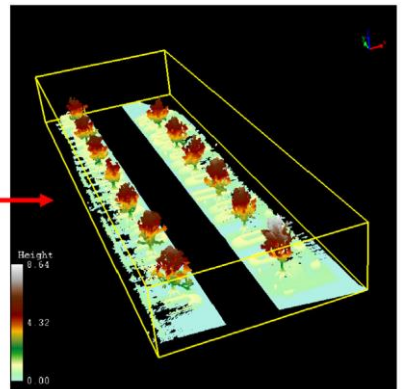
What would be the actionable policy incentives?



Integrated sensing

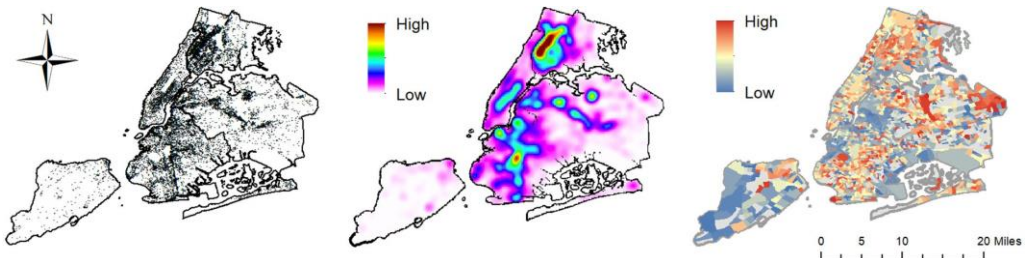


Evaluate the impacts of built environment



Urban Building Energy

How can macro and micro urban variable affect the building energy consumption in the urban scale? How to quantitatively measure the effectiveness of various energy saving practice?



馬博士於2020年8月加入香港大學城市規劃與設計系並擔任助理教授一職。他於2016年在香港科技大學獲得土木與環境工程博士學位，並於2012年在華中科技大學獲得機械工程學士學位。在加入DUPAD之前，他曾在中國大陸創辦或共同創辦過多家科技公司，並且在2015年贏得了Inno-China的全國總冠軍。目前，他擔任系裡城市分析碩士 (MUA) 項目的副主任一職。



Qiu, Waishan 邱外山

Assistant Professor
BUP (Tongji), March (UCL)
MCP (MIT), PhD (Cornell)

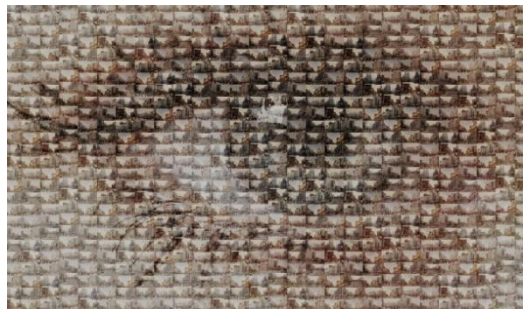
Key Research Areas:

- People and place
- Shared Mobility & Gender Disparity
- Computational Urban Design

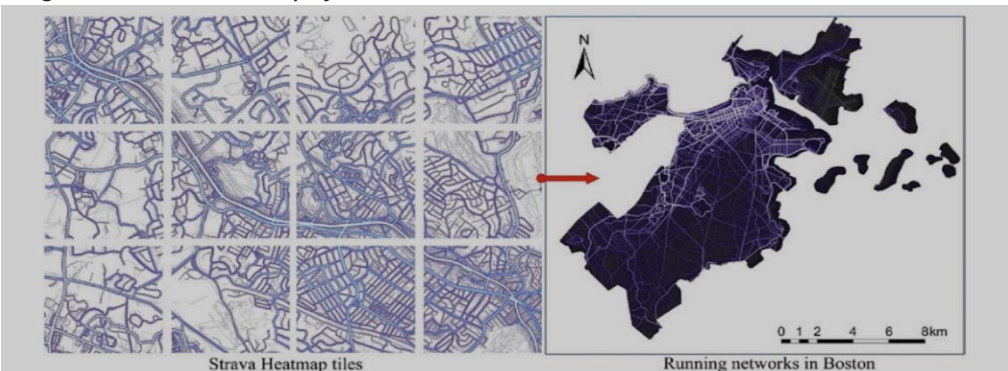
Dr Qiu is an urban researcher and designer. His research utilizes spatial analysis, sensing technology, and AI to improve mobility, shareability, and sustainability. He has been involved with various data-driven research and smart city projects across the world in places like Saudi Arabia, the United Arab Emirates, the U.S., and China. Prior to joining HKU, he was an Associate at McKinsey & Company. He obtained a Ph.D. in Regional Science'22 from Cornell University, an M.C.P.'17 from MIT, an M.Arch.'14 with distinction from UCL, and a B.E.' 13 from Tongji University. His previous lab experiences include the MIT Centre for Advanced Urbanism, the MIT Senseable City Lab, the MIT STL Real Estate Entrepreneurship Lab, and Harvard Evidence for Policy Design. Dr Qiu actively participates in many publications, lectures, and exhibitions. He was also a speaker on smart cities and big data topics, for universities and institutions.

Highlighted Research:

Subjective or objective measures of street environment, which are more effective in explaining housing prices?



Assessing impacts of objective features and subjective perceptions of street environment on running amount: A case study of Boston



邱博士在加入香港大學之前，他曾擔任麥肯錫上海辦公室(McKinsey & Company)的諮詢顧問(副職)、澳大利亞昆士蘭大學(the University of Queensland)的客座講師(2021)、麻省理工學院先進都市中心(MIT Centre for Advanced Urbanism)的研究員(2017-2018)等職務。他還曾在麻省理工的可感知城市實驗室(MIT Senseable City Lab)、數字媒體實驗室(MIT Media Lab)、公民數據設計實驗室(MIT Civic Data Design Lab)、李德義地產創業實驗室(MIT Samuel Tak Lee Real Estate Entrepreneurship Lab)以及哈佛大學肯尼迪學院政策研究中心(Harvard Evidence for Policy Design)擔任研究助理。他已發表了 20 多篇 SCI 論文，入選 ESI 高被引論文，並擔任 10 多家 SCI 期刊的同行評審，包括 Cities、Habitat International、Urban Design International 等。他還參與策劃了深港建築和城市雙年展(2019)、麻省理工的“住宅+”雙年展(Housing+·2018)等展覽；並受邀在哈佛、哥倫比亞、中國國家規劃院等地進行講座。他的設計作品曾刊登在麻省理工新聞(MIT News)、谷德設計網等媒體。



Sun, Guibo 孫貴博

Assistant Professor

BSc & MSc(LNTU)

PhD(CUHK)

Key Research Areas:

- Transport and Health
- Healthy ageing
- Urban Analytics
- Transport Infrastructure Development
- Urban Renewal
- Natural Experiment

Dr Sun's research focuses on *Planning, Transport, and Health*. The impacts of large-scale interventions in cities, including the development of new metro lines, large-block gated communities, urban renewal projects, and global street experiments, are profound. He specialises in developing natural experiments to estimate the causal effects of such interventions on social, economic and health outcomes (e.g., physical activity, social inclusion, subjective wellbeing, and housing price). In addition, he is working on institutional analysis of the metro infrastructure provision, using the transportation problem as an empirical question to tackle a larger issue in urban governance and to formalise the informal norm of behaviours in institutions through experimental economics (e.g., survey experiment, game-theoretical experiment). His research established essential urban data, new methodologies, and causal evidence, contributing to healthy, equitable and adaptive cities.

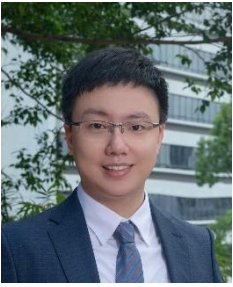
His research has won several prestigious awards, including the US Lincoln Institute China Program International Fellowship in 2023, three academic awards for research excellence from the UK's Royal Town Planning Institute in 2019 and 2021, and HKU Research Output Prize in 2021. Moreover, he received Faculty Teaching Award 2022. He is an associate editor of the Journal of Transport & Health.

Highlighted Research:

Urban Analytics and Interventions Research Lab (uLab)



孫博士的研究專注於規劃、交通和健康領域。城市中大規模干預措施的影響是深遠的，其中包括新地鐵線路的建設、大型封閉社區、城市更新項目和全球街道實驗。他專注於開展自然實驗，以估計此類干預措施對社會、經濟和健康結果（如社會包容性、主觀幸福感和房價）的因果效應。此外，他還在進行地鐵基礎設施供給的制度分析，通過交通問題作為實證問題來解決城市治理中的制度設計問題，並通過實驗經濟學（如調查實驗、博弈理論實驗）正式化機構中非正式行為準則。他的研究為健康、公平和適應性城市做出了重要貢獻，建立了關鍵的城市數據、新的方法論和因果證據。他的研究獲得了多個重要獎項，包括2023年美國林肯研究所中國項目國際研究獎、2019年和2021年英國皇家城市規劃學院的三項研究卓越學術獎，以及2021年香港大學研究成果獎。他還獲得了2022年度教學優秀獎。他是國際期刊《交通與健康》的副編輯。



Yang, Tianren 楊天人

Assistant Professor

BEng (Tongji), MSc (Georgia Tech)

MEng (Tongji), PhD (Cambridge)

FRGS, FHEA, MRTPI, LEED AP, PMP

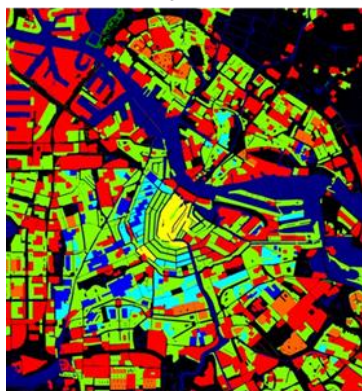
Key Research Areas:

- *Computation Urban Models*
- *Urban Spatial Structure and Travel*
- *Planning Support Systems for Decision-making*
- *Urban Big Data and AI*

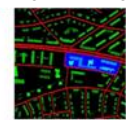
Dr Tianren Yang is interested in the development and application of urban analytics and predictive modelling techniques. He aims to provide a comprehensive understanding of how cities evolve, with a particular emphasis on the dynamic influences of urban technology, planning policy and human behaviour. As a chartered urban planner, Dr Yang leverages his academic expertise in practical contexts, offering extensive consultation within the sectors of real estate and city development. He aims to translate his research insights into actionable decision-making. His professional engagements have included roles at the China Development Bank, the Boston Consulting Group, and the EPSRC Centre for Smart Infrastructure and Construction, where he analysed and modelled large-scale urban changes.

Highlighted Research:

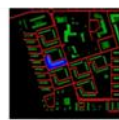
AI-driven classification and design of urban fabric



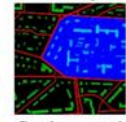
n Type Label Image (PTL) of Amsterdam



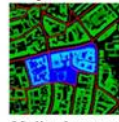
Linear development



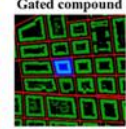
Open block



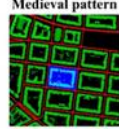
Gated compound



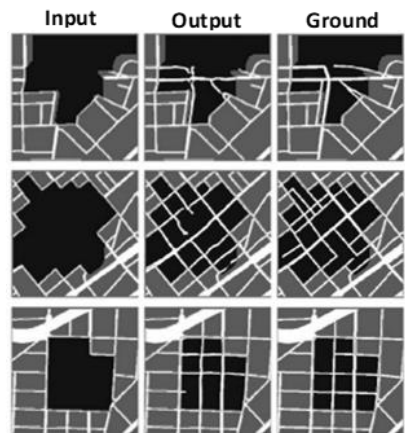
Medieval pattern



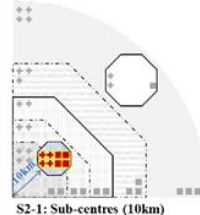
Irregular grid



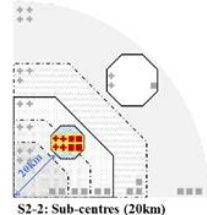
Orthogonal grid



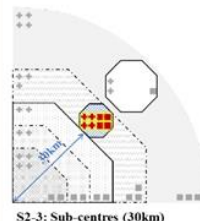
Urban simulation and scenario planning



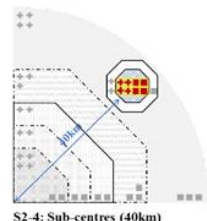
S2-1: Sub-centres (10km)



S2-2: Sub-centres (20km)



S2-3: Sub-centres (30km)



S2-4: Sub-centres (40km)

楊博士為香港大學城市規劃及設計系助理教授、香港大學深圳研究院副研究員，英國劍橋大學博士、博士後。他主要從事城市演化機制與城市系統建模研究，關注對城市發展的規律識別、量化歸因與未來推演，擔任Journal of Urban Planning and Development編委，獲國際城市與區域規劃師學會年度最佳論文獎、美國地理學家學會區域發展與規劃分會“學術新星”獎、中國國土空間規劃學術年會優秀論文獎等。此外，楊博士也入選了中國科協青年人才托舉工程。



Zhang, Xiaohu 張嘯虎

Assistant Professor
BSc(SYSU), PhD(HKU)

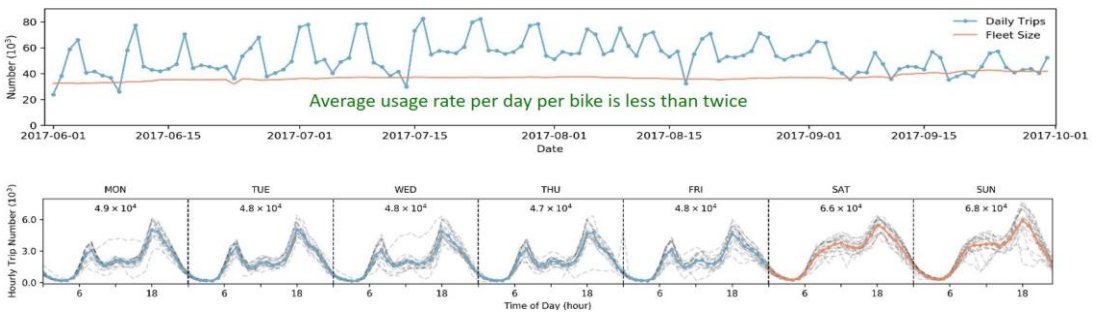
Key Research Areas:

- Shared Mobility
- Urban Simulation
- Urban Data Science

Dr Xiaohu Zhang is an Assistant Professor in DUPAD. Prior to this, he worked in Singapore-MIT Alliance for Research and Technology, MIT Senseable City Laboratory and Sun Yat-Sen University. His scholarship bridges the information gap in sustainable urban and transportation policy-making with stochastic simulation and big data analytics. Broadly interested in urban data science, his recent work explores the sustainability of new shared mobility services, such as scooter sharing, carsharing and ridesharing. His research uses multi-source datasets to advance understanding of pressing urban and transportation issues, e.g., urban expansion, emerging mobility services and the interactions between land use and transportation.

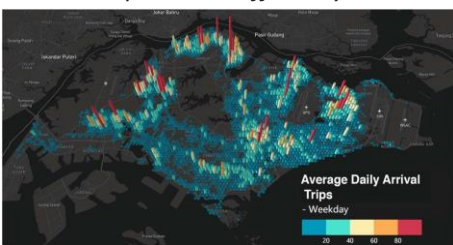
Highlighted Research:

Sustainable Shared Mobility

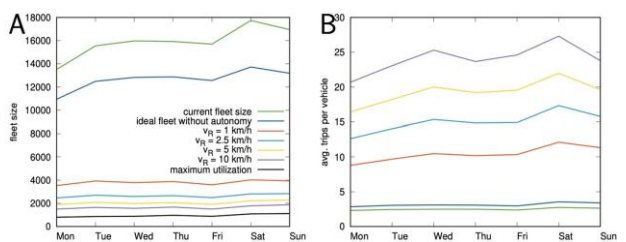


Transportation Research Part D: Transport and Environment. 2021; 98: 102961

How to Improve the Efficiency?



Computers, Environment and Urban Systems. 2019; 75: 184-203



IEEE Transactions on Intelligent Transportation Systems. 2022; 23(5) :4651-4662

張博士為香港大學城市設計與規劃系助理教授，研究主要聚焦於共用交通、出行行為分析以及多智慧體模擬。他先後於香港大學、新加坡-麻省理工學院研究中心以及麻省理工可感知城市實驗室從事研究工作，長期以來致力於將新興技術在城市規劃和交通的可持續發展中的應用。研究結合多來源資料分析對迫切需要解決的城市規劃與交通問題提供及時的決策支援資訊，尤其在土地利用與交通模擬和共用出行方面取得了領先的研究成果。他的多項工作發表於地理資訊系統、遙感、城市規劃和交通等國際學術期刊上。



Zhao, Zhan 趙展

Assistant Professor
BEng (Tongji), MS (UBC)
PhD (MIT)

Key Research Areas:

- AI for Transport Planning
- Human Mobility and Travel Behaviour
- Public Transport Systems
- Urban Data Science

Dr Zhan Zhao is an Assistant Professor at the Department of Urban Planning and Design, The University of Hong Kong (HKU), and a member of the HKU Urban System Institute and Musketeers Foundation Institute of Data Science. His research interests lie in the intersection of data science, human behaviour, and urban mobility, with particular focus on integrating latest advances in machine learning and artificial intelligence into urban science. Prior to joining HKU, Dr Zhao was a senior data scientist at Via Transportation Inc. Over the years, he has worked at, and collaborated with, research institutes and government agencies around the world, including Singapore-MIT Alliance for Research and Technology, IBM Research – Ireland, Transport for London, TransLink (British Columbia), and Energy Foundation China.

Highlighted Research:

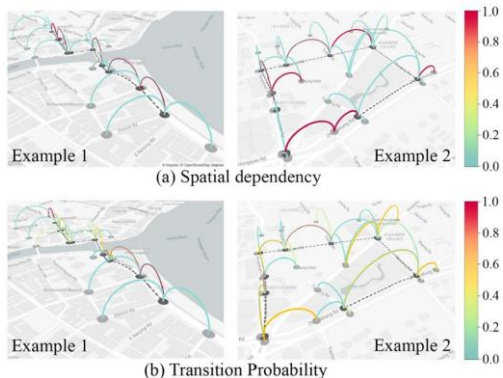
Deep Learning for Route Choice Modelling

Deep inverse reinforcement learning for route choice modeling



Transportation Research Part C: Emerging Technologies, 2023; 149: 104079

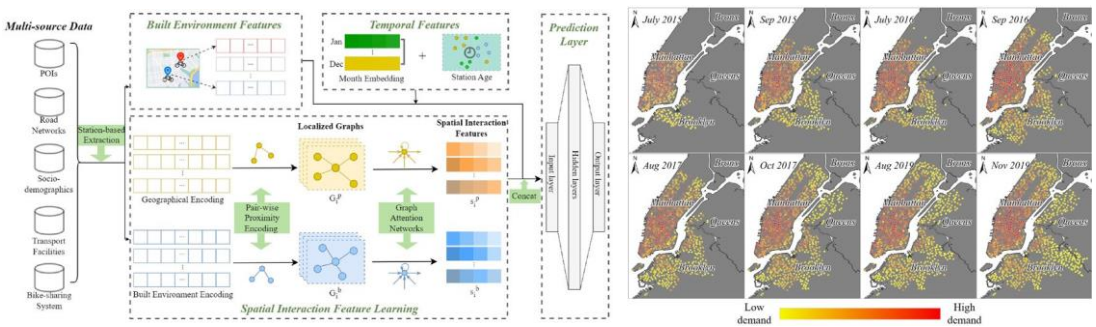
Network-based trajectory prediction with spatiotemporal attention mechanisms



IEEE Transactions on Intelligent Transportation Systems 2022; 23(9): 14470-14481

AI for Bike Sharing System Planning

Deep trip generation with graph neural networks for bike sharing system expansion



Preprint, 2023 (working paper); <https://doi.org/10.48550/arXiv.2303.11977>

趙博士為香港大學城市規劃與設計系助理教授，也是港大城市系統研究院和同心基金數據科學研究所的成員。他的研究定位在數據科學、人類行為和城市交通的交叉領域，特別是將最新的機器學習和人工智能技術融入城市科學相關應用。在加入港大之前，趙博士是 Via 的高級數據科學家。多年來，他在世界各地的多個研究和政府機構工作並與之合作，包括新加坡-麻省理工學院研究與技術聯盟、IBM 愛爾蘭研究院、倫敦交通局、TransLink 和中國能源基金會等。



Zhou, Yulun 周鈺倫

Assistant Professor
BEng (Fudan), MSc (CUHK)
PhD (CUHK)

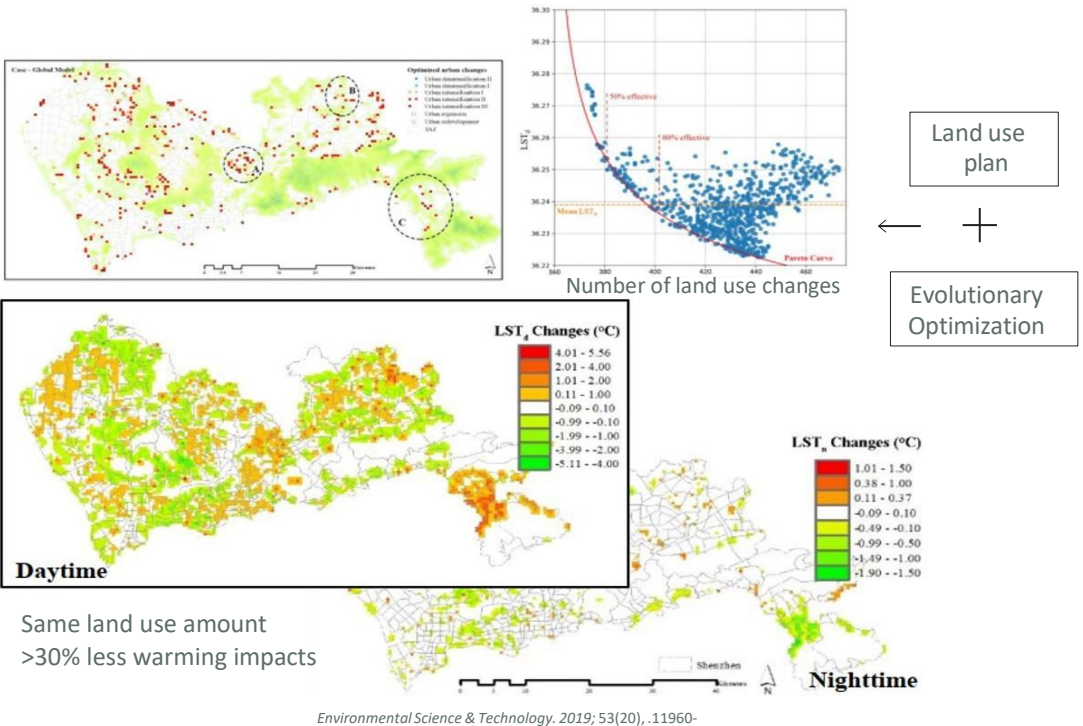
Key Research Areas:

- Spatial Data Mining
- Smart City Decision Support Systems
- Spatial Cognition and Behavioural Analysis

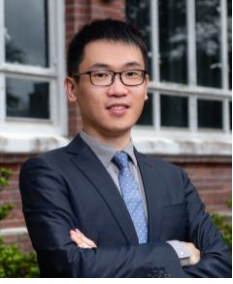
Dr Zhou works on spatial data mining and smart city decision science. Leading an interdisciplinary team from physical science, mathematics, urban planning, and geospatial computing, he investigates how computer intelligence can inform sustainable, reliable decision making in future cities, leveraging cutting-edge research on urban information systems (GIS, BIM, CIM), AI-driven decision support systems (optimization, generative models), and their overlaps. Recent works include vector-based pedestrian navigation in cities (in *Nature Computational Science*), AI-driven urban land use planning (in *Env. Sci. & Tech.*), low-cost, indoor air pollutant sensors (in *Env. Pollution*), and urban vibrancy assessment using big data (in *Env. Plan. B*). Before joining HKU, Dr Zhou worked as a PhD researcher at *MIT Senseable City Laboratory* and *Harvard Healthy City Laboratory*. He was awarded a *National GIS Technology Advances Award* in 2022.

Highlighted Research:

AI + Climate-conscious Land Use Planning



周博士領導一個跨學科團隊，專注於空間數據挖掘和可信任的智慧城市大數據決策科學。團隊結合物理學、數學、城市規劃和地理空間計算等交叉領域知識，在地理信息系統及其智慧城市應用（GIS·BIM·CIM）、時空統計與機器學習，以及基於大數據的行人軌跡理解與建模領域中具有十年經驗。此外，他還研究應用基於人工智能的空間決策支持系統，如空間優化技術和生成模型，並應用於增強城市規劃、資源分配與決策。周博士最近的研究項目包括行人矢量導航機制，人工智能驅動的城土地利用規劃，低成本室內空氣污染物傳感器研發與數據質量優化，以及大數據驅動的城活力評估。相關工作發表在 *Nature Computational Science*、*Env. Sci. & Tech.* 等多學科國際頂尖期刊上。加入香港大學之前，周博士曾在麻省理工學院可感知城市實驗室和哈佛健康城市實驗室擔任博士研究員，其「類腦智能導航機制」相關工作於2022年獲中國地理信息產業協會GIS技術進步一等獎。



Zhu, Jin 朱金

Assistant Professor
BEng (Zhejiang), MEng (Tongji)
PhD (UNSW)

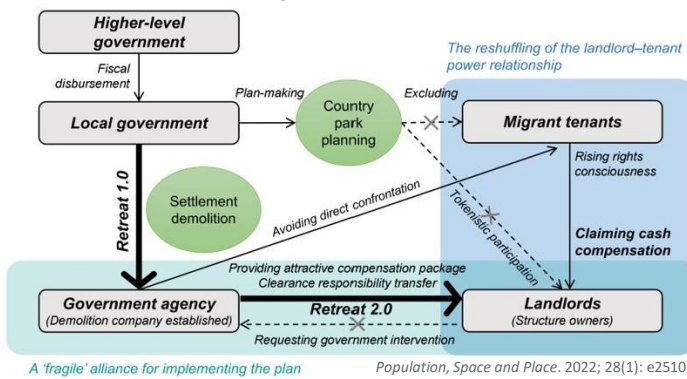
Key Research Areas:

- Housing Policy
- Land Policy
- Urban Planning and Governance

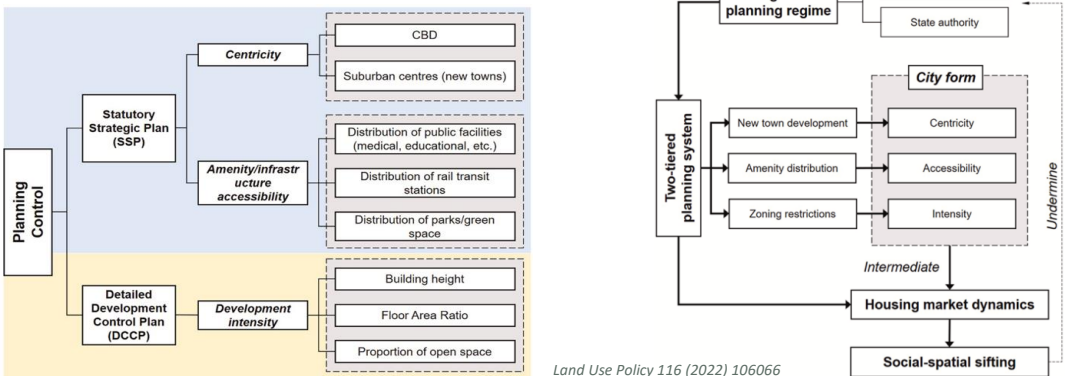
Dr Zhu is an Assistant Professor in land and housing policy. Prior to this position, he worked as an Assistant Professor at City University of Hong Kong. His research interests span housing and land policy, urbanisation and migration, sustainable built environment and urban governance. He completed his PhD (Planning and Urban Development) at University of New South Wales (UNSW), Australia and received his bachelors and master's degrees in urban planning from Zhejiang and Tongji Universities, China. Before his PhD, Jin worked as a town planner at Shanghai Urban Planning and Design Institute and consulted widely for different levels of government in mainland China. During his PhD at UNSW, he also worked as a part-time researcher at the university's City Futures Research Centre and Social Policy Research Centre.

Highlighted Research:

Migration and Urbanisation Challenges



Planning and Housing Market Dynamics Research



朱博士為香港大學城市規劃及設計系及房地產及建設系助理教授。兼任中國城市規劃學會國外城市規劃分會青年委員、*Planning Practice & Research* 期刊編委。他分別於浙江大學、同濟大學、澳洲新南威爾士大學獲得城鄉規劃專業的學士、碩士、博士學位。研究方向主要包括城市化及人口流動、土地與住宅政策、都市更新、城市可持續發展、鄉村規劃等。主持國家自然科學基金青年基金。目前已在國內外規劃及城市研究領域知名期刊發表學術論文 30 餘篇，Google 學術引用超過 1100 次，曾獲金經昌中國城市規劃優秀論文獎等國家級論文獎 2 次。



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