

PHD CANDIDATE

INTERESTS

3D and 2D Urban Analytics
Machine Learning
Geospatial Science
Urban Networks
Complex Urban Systems

EDUCATION

PhD, Urban Analytics Lab (4.75/5.0)
National University of Singapore
Supervised by Prof. Filip Biljecki

2021 - 2025

Masters of Urban Planning (95th Perc.)
National University of Singapore

2017 - 2018

BSc Real Estate (Hons) w.
Specialisation in Urban Planning
National University of Singapore

2013 - 2017

Integrated Programme
Raffles Institution

2005 - 2010

REFEREES

CHAN Heng Chee
Professor (Former Chair)
Lee Kuan Yew Centre for
Innovative Cities
(PA) serena_lin@sutd.edu.sg

NEO Harvey
Professorial Fellow
Lee Kuan Yew Centre for
Innovative Cities
harvey_neo@sutd.edu.sg

RESEARCH EXPERIENCE

Research Associate
Lee Kuan Yew Centre for
Innovative Cities

2018 - 2021

Lee Li Ming Programme in Ageing Urbanism
Innovative Planning and Design of Age-Friendly
Neighbourhoods in Singapore (NRF-MND)

Programme on Cities and Urban Science
Future of Asian Cities - Citizen Urban Science:
Policy and Practice (MOE)

Programme on Cities and Urban Science
Sociospatial Reconfiguration of the City in a
Post-Covid World (LKYCIC)

MANUSCRIPT PUBLICATION

Yap, W. & Biljecki, F. (Under-review). A Global Feature-Rich Network Dataset of Cities and Dashboard for Comprehensive Urban Analyses. Scientific Data.

Yap, W., Stouffs, R., & Biljecki, F. (Accepted). Urbanity: Automated Modelling and Analysis of Multidimensional Networks in Cities. npj Urban Sustainability.

Yap, W., Janssen, P., & Biljecki, F. (2022). Free and open source urbanism: software for urban planning practice. Computers, Environment and Urban Systems, 96, 101825. <https://doi.org/10.1016/j.compenvurbsys.2022.101825>

Yap, W., Chang, J. H., & Biljecki, F. (2022). Incorporating networks in semantic understanding of streetscapes: Contextualising active mobility decisions. Environment and Planning B: Urban Analytics and City Science, 50, 1416-1437. <https://doi.org/10.1177/23998083221138832>

Chan, H. C. & **Yap, W.** (Forthcoming). Making public housing work: The Singapore case. Council of Urban Initiatives. UN-Habitat, UCL IIPP and LSE Cities.

Song, S., **Yap, W.**, Hou, Y., & Yuen, B. (2020). Neighbourhood built Environment, physical activity, and physical health among older adults in Singapore: A simultaneous equations approach. Journal of Transport & Health, 18, 100881.

Hou, Y., **Yap, W.**, Chua, R., Song, S., & Yuen, B. (2020). The associations between older adults' daily travel pattern and objective and perceived built environment: A study of three neighbourhoods in Singapore. Transport Policy, 99, 314-328.

PRESENTATIONS

(Upcoming) "Street view imagery: Have we answered all the questions with it? What's left to do?". 4th Spatial Data Science Symposium. Virtual. 6 September, 2023.

(Upcoming) "Free and Open Source Digital Planning Tools". Invited Talk at Planning Institute of Australia, PlanTech Series. 20 July, 2023.

"Drivers and Challenges of Digital Citizen Participation: Experiential Evidence from Southeast Asian Cities". RC21 Conference: Sensing the City. Antwerp. 15 July, 2021.

BOOKS / BOOK CHAPTERS

Nicholas, S & **Yap, W.** (Forthcoming). Is the City Center Hollowing Out?, In Chan, H. C., Neo, H., & Joyce, S (Eds), Socio-spatial Reconfiguration of the City Post-Covid, World Scientific.

Chan, H. C., **Yap, W.**, & Nicholas, S. (Forthcoming). The Magic of Modernity, In Chan, H. C., Neo, H., & Joyce, S (Eds), Socio-spatial Reconfiguration of the City Post-Covid, World Scientific.

Yuen, B., Močnik, Š., Moogoor, A., Dieterich, A., **Yap, W.**, & Bhuyan, M. R. (2022). Age-friendly Neighbourhood Environmental Audit Toolkit, World Scientific (electronic print).

Yuen, B., Bhuyan, M. R., Dieterich, A., **Yap, W.**, & Chua, R. (2022). Age-friendly Neighbourhood Post-implementation Toolkit, World Scientific (electronic print).

Yuen, B., Bhuyan, M. R., Song, S., Moogoor, A., **Yap, W.**, Močnik, Š., & Chua, R. (2022). Age-friendly Neighbourhood Planning and Design Guidelines: A Singapore Case Study, World Scientific.

Yap, W & Norakmal, H. (2021). Tokyo - Pushing Frontiers, Planning for Society 5.0., In Arturo, B., Christos, C., Bruno, L., & Chan, H. C. (Eds), *Cities in a Time of Global Emergencies*. IMD.

Yuen, B., Močnik, Š., Yu, C. F., & **Yap, W.** (2020). Ageing-friendly neighbourhoods in Singapore, Asia-Pacific, Europe and North America: An Annotated Bibliography, Springer Briefs in Aging.

SKILLS

Analytical

Software Development (C++/Python); Machine Learning (Pytorch/TensorFlow 2.0); Computer Vision (OpenCV/Detection/Segmentation); Geospatial Analytics (Sf; Geopandas; QGIS); Web Scraping; Data Science & Analytics (R/Python)

Design

Web Development (HTML5; Javascript; CSS; Bootstrap); Mobile App Development (Flutter API); Smart Dashboards (Dash API; PyDeck); Poster Layout & Report Design (Adobe Photoshop; Adobe InDesign); 3D Modelling and Visualisation (Blender).

TEACHING

Graduate Teaching Assistant, DEP5101 Planning Technologies (R Programming for Urban Science).
@National University of Singapore - Spring 2022.

Bootcamp Instructor, Masters of Urban Science, Policy, and Planning Python Programming Bootcamp.
@Singapore University of Technology and Design - Spring 2023.

MENTORING

Brian van Laar, Master of Science, Spatial, Transport and Environmental Economics, VU Amsterdam.

ACADEMIC ACTIVITIES & SERVICES

Reviews

Geoforum	2019
International Journal of Geographical Information Science	2022
Journal of Open Source Software	2022
Transportation Research Part D;	2023
Sustainable Cities and Society	2023
Environment & Planning B	2023
Geographical Analysis	2023

Services

College Representative for National University of Singapore Graduate Education Virtual Open House	2022
Organizing Committee for SUTD-NUS PhD Symposium	2022

AWARDS

Asian Masters of Urbanism Programme

The University of Tokyo

NUS PhD Research Scholarship

National University of Singapore