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Biographical Information

a. Education

- **Doctor of Philosophy (2011)** School of Geographical Sciences and Urban Planning, Arizona State University
 - *Thesis title: Microscale modeling of the canopy-layer urban heat island in Phoenix, Arizona: validation and sustainable mitigation scenarios*
 - *Thesis Committee: Professor Anthony J. Brazel (Chair); Professor Susanne Grossman-Clarke; Professor Chris A. Martin*
- **Master of Social Sciences (2005)** Geography, National University of Singapore
 - *Thesis title: The temporal dynamics of the urban heat island of Singapore*
 - *Supervisor: Professor Matthias Roth*
- **Bachelor of Social Sciences (First Class Honours) (2002)** Geography, National University of Singapore
 - *Thesis title: Canopy-level nocturnal urban heat island and humidity field dynamics over western Singapore*
 - *Supervisor: Professor Matthias Roth*
- **Bachelor of Arts (with Merit) (2001)** English Literature and Geography, National University of Singapore

b. Employment Experience

- **Associate Professor of Urban Climate (Tenured)**
 College of Integrative Studies, Singapore Management University [Jul 2019 -]
- **Assistant Professor of Geography (Tenure-Track)**
 Department of Geography, National University of Singapore [Aug 2013-Jun 2019]
 Adjunct appointment as Honorary Assistant Professor, Institute of Water Policy, Lee Kuan Yew School of Public Policy, National University of Singapore [Apr 2016-Jun 2019]
- **Research Fellow & Postdoctoral Research Associate**
 Department of Engineering, College of Technology and Innovation, Arizona State University; Concurrent appointment with Department of Geography, National University of Singapore [Jun 2011-Aug 2013]

c. Local & International Awards

- Nominated by the Republic of Singapore Government as **Singapore's candidate for Intergovernmental Panel on Climate Change (IPCC) Bureau as Co-Chair, Working Group II** for 7th Assessment Cycle from 2023-2030.

- Press release 10th April 2023 <https://www.mse.gov.sg/resource-room/category/2023-04-10-press-release-winston-chow-nomination-to-ipcc-bureau>
- **Lee Kong Chian Research Fellow**, Singapore Management University (2022-)
- **Invited Lead Author**, IPCC Working Group II 6th Assessment Report (AR6) on Climate Change (2017-2022)
 - Chapter 6 “Cities, Settlements and Key Infrastructure”
 - Cross Chapter Paper 2 “Cities and Settlements by the Sea”
 - Technical Summary, Working Group II 6th Assessment Report
- **Invited Contributing Author**, IPCC 6th Assessment Report (AR6) on Climate Change (2019-2022)
 - Working Group I, Chapter 12 “Climate Change Information for Regional Impact and for Risk Assessment”
 - Working Group II, Chapter 16 “Key Risks across Sectors and Regions”, Annex 1 “Global to Regional Atlas”, and Factsheets for “Human Settlements”, “Cities and Settlements by the Sea”, and “Responding to Sea Level Rise”.
 - Working Group III, Chapter 8 “Urban Systems and Other Settlements”
- **Promising Researcher Award**, Faculty of Arts and Social Sciences, National University of Singapore (2016/2017)
- **Early Career Scientist Travel Award**, 4th Annual Membership Meeting, NEON (National Ecological Observatory Network), Boulder, Colorado (Sep 15-17, 2011)
- **Freeman Foundation Fellow**, Salzburg Global Seminar Session 454 “Combating Climate Change at Local and Regional Scales: Sustainable Strategies, Renewable Energy”, Salzburg, Austria (Jul 9-13, 2008)
- **Overseas Graduate Scholar**, Department of Geography, Faculty of Arts and Social Sciences, National University of Singapore (2008-2011)
- **University Graduate Fellow**, Division of Graduate Studies, Arizona State University (2006-2009)
- **Geographical Sciences Associate Award**, School of Geographical Sciences, Arizona State University (2006/2007)
- **International Interdisciplinary Presentation Award**, School of Geographical Sciences, Arizona State University (2006/2007)
- **Graduate Research Scholar**, Department of Geography, Faculty of Arts and Social Sciences, National University of Singapore (2002-2004).
- **Local Merit Undergraduate Scholar**, Public Service Commission, Government of the Republic of Singapore (1998-2002)

1. Academic Research

a. Major Research Interests

- Urban heat island science, impacts, and mitigation
- Urban vulnerability to climate change risk and climate adaptation

b. Awarded research grants

- **Cool Paints Trials in Schools to mitigate UHI effects** Funding Agency: National Environmental Agency, Singapore. 1.5 years; May 2023 – Oct 2024; Principal Investigator.
- **Cooling Singapore 2.0: Urban Climate Risks** Funding agency: National Research Foundation; 3 years; Oct 2022 – Sep 2025; Lead Principal Investigator.
- **Cooling Singapore 2.0: Digital Urban Climate Twin** Funding agency: National Research Foundation; 3 years; Sep 2020 – Aug 2023; Co-Lead Principal Investigator.
- **Environmental perception in Mandai Parks** Funding agency: Mandai Park Development Pte. Ltd; 3 years; July 2019 – Jan 2023; Principal Investigator.
- **Cooling Singapore 1.5: Virtual Singapore Urban Climate Design** Funding agency: National Research Foundation; 1.5 years; April 2019 – Sep 2020; Co-Principal Investigator.
- **Cooling Singapore** Funding agency: National Research Foundation; 2 years; Jan 2017 – Dec 2018; Co-Principal Investigator.
- **Creating Cooler Parks in the Future** Funding agency: National Parks Board; 2.25 years; Dec 2016 – Feb 2019; Principal Investigator.
- **Investigating the Resilience of Singapore's Water Supply to Meteorological Drought** Funding agency: Institute of Water Policy, National University of Singapore; 1 year; Aug 2016 – Jul 2017; Principal Investigator.
- **Evaluating the Thermal Regulation of Singapore's Urban Green Spaces: a Multi-method Investigation** Funding Agency: Humanities and Social Sciences Seed Fund, National University of Singapore; 1.5 years; Jul 2016 – Jan 2018; Principal Investigator.
- **Three-dimensional observation and modelling of small-scale urban climates in Singapore** Funding Agency: Faculty of Arts and Social Sciences, National University of Singapore; 3 years; Aug 2013 – Jul 2016; Principal Investigator.
- **Estimating the anthropogenic heat and CO₂ fluxes of a xeric residential neighbourhood** Funding Agency: Global Institute of Sustainability and School of Mathematical and Statistical Sciences. Arizona State University; 6 months; Feb – Jun 2013; Principal Investigator.

- **Assessing Decadal Climate Change Impacts on Urban Populations in the South-western USA** Funding Agency: National Science Foundation; 2 years; Jun 2011-Jun 2013. Principal Investigator.
- **Influence of Urbanization on Weather in the Arid Phoenix Metropolitan Area** Funding Agency: National Science Foundation; 3 years; Jun 2008 – Jun 2011; Doctoral Student Scholarship.
- **Central Arizona-Phoenix Long-Term Ecological Research** Funding Agency: National Science Foundation; 4 years; Jun 2007-Jun 2011; Doctoral Student Scholarship.
- **Urban Heat Island Dynamics in Singapore** Funding Agency: National University of Singapore; 2 years; Aug 2002 – Jul 2004; Graduate Student Scholarship.

c. Research Publications (Peer Reviewed)

Database	Total citations	h-index	Field-Weighted Citation Index
Google Scholar	3,388	27	-
Web of Science	2,161	24	-
Scopus	2,355	24	3.09 (From 2017-2022)

NB: Underlined names indicate mentored student or postdoc; asterisk (*) indicates thesis committee member in publication.

2022

1. Adelekan, I., A. Cartwright, **W.T.L. Chow**, S. Colenbrander, R. Dawson, M. Garschagen, M. Haasnoot, M. Hashizume, I. Klaus, J. Krishnaswamy, M.F. Lemos, D. Ley, T. McPhearson, M. Pelling, P.P. Kodira, A. Revi, L.M. Sara, N.P. Simpson C. Singh, W. Solecki, A. Thomas, and C. Trisos. 2022: *The Summary for Urban Policymakers (SUP) Volume II: What the latest science on impacts, adaptation and vulnerability means for cities and urban areas*. Indian Institute for Human Settlements. <https://doi.org/10.24943/SUPSV209.2022> (Open Access)
2. Banerjee, S., G.N.Y Ching, S. K. Yik, Dzyuban, Y., P. J. Crank, R.X.Y. Pek, and **W.T.L. Chow**. 2022: "Analysing impacts of urban morphological variables and density on outdoor microclimate for tropical cities: A review and a framework proposal for future research directions" *Building and Environment*, 225, 109646. [DOI:10.1016/j.buildenv.2022.109646](https://doi.org/10.1016/j.buildenv.2022.109646). (Open Access)
3. Gillerot, L., D. Landuyt, R. Oh, **W.T.L. Chow**, D. Haluza, Q. Ponette, H. Jactel, H. Bruelheide, B. Jaroszewicz, M. Scherer-Lorenzen, P. De Frenne, B. Muys, and K. Verheyen. 2022: "Forest structure and composition alleviate human thermal stress." *Global Change Biology*, [DOI:10.1111/gcb.16419](https://doi.org/10.1111/gcb.16419)
4. Lipson, M., C.S.B. Grimmond, M. Best, **W.T.L. Chow**, A. Christen, N. Chrysoulakis, A. Coutts, B. Crawford, S. Earl, J. Evans, K. Fortuniak, B.G. Heusinkveld, J-W. Hong, J. Hong, L. Järvi, S. Jo, Y-H. Kim, S. Kotthaus, K. Lee, V. Masson, J.P. McFadden, O. Michels, W. Pawlak, M. Roth, H. Sugawara, N. Tapper, E. Velasco, and H.C. Ward. 2022: "Harmonized gap-filled datasets from 20 urban flux tower sites." *Earth System Science Data*. 14, 5157–5178 [DOI:](https://doi.org/10.5194/essd-14-5157-2022)

[10.5194/essd-14-5157-2022](#) (Open Access)

5. Nazarian, N., E. S. Krayenhoff, B. Bechtel, D. Hondula, R. Paolini, J. Vanos, T. Cheung, **W. T. L. Chow**, R. de Dear, O. Jay, J. K. W. Lee, A. Martilli, A. Middel, L. K. Norford, M. Sadeghi, S. Schiavon, and M. Santamouris. 2022: "Integrated Assessment of Urban Overheating Impacts on Human Life." *Earth's Future*, 10:8, e2022EF002682. [DOI:10.1029/2022EF002682](#) (Open Access)
6. Dzyuban, Y., G.N.Y Ching, S. K. Yik, A. J. Tan, P. J. Crank, S. Banerjee, R.X.Y. Pek, and **W.T.L. Chow**. 2022: "Sentiment analysis of weather-related Tweets from cities within hot climates." *Weather, Climate and Society*. 14(4) 1133-1145. [DOI: 10.1175/WCAS-D-21-0159.1](#). (Open Access)
7. Dzyuban, Y., G.N. Ching, S.K. Yik, A.J. Tan, S. Banerjee, P.J. Crank, and **W.T.L. Chow**. 2022: "Outdoor thermal comfort research in transient conditions: A narrative literature review." *Landscape and Urban Planning*, 226, 104496. [DOI:10.1016/j.landurbplan.2022.104496](#) (Open Access)
8. Pörtner, H.-O., D.C. Roberts, H. Adams, I. Adelekan, C. Adler, R. Adrian, P. Aldunce, E. Ali, R. Ara Begum, B. Bednar-Friedl, R. Bezner Kerr, R. Biesbroek, J. Birkmann, K. Bowen, M.A. Caretta, J. Carnicer, E. Castellanos, T.S. Cheong, **W.T.L. Chow**, G. Cissé, S. Clayton, A. Constable, S. Cooley, M.J. Costello, M. Craig, W. Cramer, R. Dawson, D. Dodman, J. Efitre, M. Garschagen, E.A. Gilmore, B. Glavovic, D. Gutzler, M. Haasnoot, S. Harper, T. Hasegawa, B. Hayward, J.A. Hicke, Y. Hirabayashi, C. Huang, K. Kalaba, W. Kiessling, A. Kitoh, R. Lasco, J. Lawrence, M.F. Lemos, R. Lempert, C. Lennard, D. Ley, T. Lissner, Q. Liu, E. Liwenga, S. Lluch-Cota, S. Löschke, S. Lucatello, Y. Luo, B. Mackey, K. Mintenbeck, A. Mirzabaev, V. Möller, M. Moncassim Vale, M.D. Morecroft, L. Mortsch, A. Mukherji, T. Mustonen, M. Mycoo, J. Nalau, M. New, A. Okem, J.P. Ometto, B. O'Neill, R. Pandey, C. Parmesan, M. Pelling, P.F. Pinho, J. Pinnegar, E.S. Poloczanska, A. Prakash, B. Preston, M.-F. Racault, D. Reckien, A. Revi, S.K. Rose, E.L.F. Schipper, D.N. Schmidt, D. Schoeman, R. Shaw, N.P. Simpson, C. Singh, W. Solecki, L. Stringer, E. Totin, C.H. Trisos, Y. Trisurat, M. van Aalst, D. Viner, M. Wairu, R. Warren, P. Wester, D. Wrathall, and Z. Zaiton Ibrahim. 2022: "Technical Summary" In: *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 37-118, [DOI:10.1017/9781009325844.002](#).
9. Dodman, D., B. Hayward, M. Pelling, V. Castan Broto, **W.T.L. Chow**, E. Chu, R. Dawson, L. Khirfan, T. McPhearson, A. Prakash, Y. Zheng, and G. Ziervogel. 2022: "Cities, Settlements and Key Infrastructure." In: *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 907-1040, [DOI:10.1017/9781009325844.008](#).
10. Glavovic, B., R. Dawson, **W.T.L. Chow**, M. Garschagen, M. Haasnoot, C. Singh, and A. Thomas. 2022: "Cross-Chapter Paper 2: Cities and Settlements by the Sea." In: *Climate Change 2022: Impacts, Adaptation, and Vulnerability*.

Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Lössche, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 2163-2194, [DOI:10.1017/9781009325844.019](https://doi.org/10.1017/9781009325844.019).

2021

11. Georgescu, M., M. Arabi, **W. T. L. Chow**, E. Mack, and K. C. Seto. 2021: "Focus on sustainable cities: urban solutions toward desired outcomes." *Environmental Research Letters*, 16, 12. [DOI:10.1088/1748-9326/ac37d1](https://doi.org/10.1088/1748-9326/ac37d1) (Open Access)
12. Pelling, M., **W.T.L. Chow**, E. Chu, R. Dawson, D. Dodman, A. Fraser, B. Hayward, L. Khirfan, T. McPhearson, A. Prakash, and G. Ziervogel. 2021: "A climate resilience research renewal agenda: learning lessons from the COVID-19 pandemic for urban climate resilience." *Climate and Development*. [DOI:10.1080/17565529.2021.1956411](https://doi.org/10.1080/17565529.2021.1956411) (Open Access)
13. Ossola, A., G.D. Jenerette, A. McGrath, **W.T.L. Chow**, L. Hughes, and M.R. Leishman. 2021: "Small vegetated patches greatly reduce urban surface temperature during a summer heatwave in Adelaide, Australia." *Landscape and Urban Planning*, 209, p.104046. [DOI: 10.1016/j.landurbplan.2021.104046](https://doi.org/10.1016/j.landurbplan.2021.104046)
14. Bhardwaj, A., R.J. Wasson, **W.T.L. Chow**, and A.D. Ziegler. 2021: "High-intensity monsoon rainfall variability and its attributes: a case study for Upper Ganges Catchment in the Indian Himalaya during 1901–2013". *Natural Hazards*. [DOI:10.1007/s11069-020-04431-9](https://doi.org/10.1007/s11069-020-04431-9)

2020

15. Meili, N., G. Manoli, P. Burlando, J. Carmeliet, **W.T.L. Chow**, A.M. Coutts, M. Roth, E., Velasco, E.R. Vivoni, and S. Fatichi. 2020: "Tree effects on urban microclimate: diurnal, seasonal, and climatic temperature differences explained by separating radiation, evapotranspiration, and roughness effects" *Urban Forestry & Urban Greening*. [DOI: 10.1016/j.ufug.2020.126970](https://doi.org/10.1016/j.ufug.2020.126970) (Open Access)
16. Nazarian, N., S. Liu, M. Kohler, J.K.W. Lee, C. Miller, **W.T.L. Chow**, S.B.B. Alhadad, A. Martilli, M.Quintana, L. Sunden, and L. Norford, 2020: "Project Coolbit: Can your watch predict heat stress and thermal comfort sensation?" *Environmental Research Letters*. [DOI: 10.1088/1748-9326/abd130](https://doi.org/10.1088/1748-9326/abd130) (Open Access)
17. Martilli, A., M. Roth, **W.T.L. Chow**, M. Demuzere, M. Lipson, E.S. Krayenhoff, D.J. Sailor, N. Nazarian, J.A. Voogt, H. Wouters, A. Middel, I.D. Stewart, B. Bechtel, A. Christen, and M.A. Hart, 2020: "Summer average urban-rural surface temperature differences do not indicate the need for urban heat reduction." *OSF Preprints* [DOI:10.31219/osf.io/8gnbf](https://doi.org/10.31219/osf.io/8gnbf) (Open Access)
18. Wang, J. W., **W.T.L. Chow**, and Y.C. Wang. 2020: "A global regression method for thermal sharpening of urban land surface temperatures from MODIS and Landsat." *International Journal of Remote Sensing*, 41(8), 2986-3009. [DOI:10.1080/01431161.2019.1697009](https://doi.org/10.1080/01431161.2019.1697009)

2019

19. Meili, N., G. Manoli, P. Burlando, E. Bou-Zeid, **W.T.L. Chow**, A.M. Coutts, E. Daly, K.A. Nice, M. Roth, N.J. Tapper, E. Velasco, E.R. Vivoni, and S. Fatichi. 2019: "An urban ecohydrological model to quantify the effect of vegetation on urban climate and hydrology (UT&C v1.0)". *Geoscientific Model Development*, 13 (1), 335-362. [DOI: 10.5194/gmd-2019-225](https://doi.org/10.5194/gmd-2019-225)
20. Heng, S.L., and **W.T.L. Chow**. 2019: "How 'hot' is too hot? Evaluating acceptable outdoor thermal comfort ranges in an equatorial urban park" *International Journal of Biometeorology*. 63(6): 801-816. [DOI: 10.1007/s00484-019-01694-1](https://doi.org/10.1007/s00484-019-01694-1) (Open Access)
21. Bhardwaj, A., R.J. Wasson, A.D. Ziegler, **W.T.L. Chow**, and Y.P. Sundriyal. 2019: "Characteristics of rain-induced landslides in the Indian Himalaya: a case study of the Mandakini Catchment during the 2013 flood" *Geomorphology*, 330:100-115. [DOI: 10.1016/j.geomorph.2019.01.010](https://doi.org/10.1016/j.geomorph.2019.01.010)

2018

22. **Chow, W.T.L.** 2018: "The impact of weather extremes on urban resilience to hydro-climate hazards: a Singapore case study" *International Journal of Water Resources Development*. 34 (4): 510-524. [DOI:10.1080/07900627.2017.1335186](https://doi.org/10.1080/07900627.2017.1335186) (Open Access)
23. C.J Chuah, B. H. Ho, and **W.T.L. Chow**. 2018: "Trans-boundary variations of urban drought vulnerability and its impact on water resource management in Singapore and Johor, Malaysia" *Environmental Research Letters*. 13(7): 074011 (15 Pages) [DOI: 10.1088/1748-9326/aacad8](https://doi.org/10.1088/1748-9326/aacad8) (Open Access)
24. Wang, Y-C., B.K.H. Hu, S.W. Myint, C-C Feng, **W.T.L. Chow**, and P.F. Passy. 2018: "Patterns of land change and their potential impacts on land surface temperature change in Yangon, Myanmar" *Science of The Total Environment*. 643:738-750. [DOI: 10.1016/j.scitotenv.2018.06.209](https://doi.org/10.1016/j.scitotenv.2018.06.209).

2017

25. Bhardwaj, A., A.D. Ziegler, R.J. Wasson, and **W.T.L. Chow**. 2017: "Accuracy of rainfall estimates at high altitude in the Garhwal Himalaya (India): a comparison of secondary precipitation products and station rainfall measurements" *Atmospheric Research*. 188:30-38. [DOI:10.1016/j.atmosres.2017.01.005](https://doi.org/10.1016/j.atmosres.2017.01.005)

2016

26. **Chow, W.T.L.**, S.N.A. Ali Akbar, S.L. Heng, and M. Roth. 2016: "Assessment of measured and perceived microclimates within a tropical urban forest." *Urban Forestry & Urban Greening*. 16:62-75. [DOI:10.1016/j.ufug.2016.01.010](https://doi.org/10.1016/j.ufug.2016.01.010). (Open Access).
27. **Chow, W.T.L.**, B.D. Cheong, and B.H Ho. 2016: "A Multimethod Approach towards Assessing Urban Flood Patterns and Its Associated Vulnerabilities in Singapore." *Advances in Meteorology*. 2016: 7159132 (11 pages). [DOI:10.1155/2016/7159132](https://doi.org/10.1155/2016/7159132). (Open Access).

28. Kaplan, S., C.S. Galletti, **W.T.L. Chow**, and S.W. Myint. 2016: "First order approximation of Broadband Directional Albedo with High Resolution Quickbird Imagery: a case study for arid urban areas." *GIScience & Remote Sensing*. 53(3):303-319. [DOI:10.1080/15481603.2016.1153944](https://doi.org/10.1080/15481603.2016.1153944).
29. Alexander, P.J., B. Bechtel, **W.T.L. Chow**, R. Fealy, and G Mills. 2016: "Linking urban climate classification with an urban energy and water budget model: Multi-site and multi-seasonal evaluation." *Urban Climate*. 17:196-215. [DOI:10.1016/j.uclim.2016.08.003](https://doi.org/10.1016/j.uclim.2016.08.003).
30. Ziegler, A.D., S.I. Cantarero, R.J Wasson, P. Srivastava, S. Spalzin, **W.T.L. Chow**, and M.J. Gillen. 2016: "A Clear and Present Danger: Ladakh's increasing vulnerability to flash floods and debris flows" *Hydrological Processes*. 30:4214-4223. [DOI: 10.1002/hyp.10919](https://doi.org/10.1002/hyp.10919).
31. Gober, P., D.A. Sampson, R. Quay, D.D. White, and **W.T.L. Chow**. 2016. "Urban adaptation to mega-drought: Anticipatory water modeling, policy, and planning for the urban Southwest" *Sustainable Cities and Society*. 27:497-504. [DOI:10.1016/j.scs.2016.05.001](https://doi.org/10.1016/j.scs.2016.05.001)

2015

32. Georgescu, M., **W.T.L. Chow**, Z. Wang, A.J. Brazel, M. Roth, and V. Benson-Lira. 2015: "Prioritizing urban sustainability solutions: coordinated approaches must incorporate scale-dependent built environment induced effects." *Environmental Research Letters*. 10 (6): 061001. [DOI:10.1088/1748-9326/10/6/061001](https://doi.org/10.1088/1748-9326/10/6/061001) (Open Access).
33. Shaffer, S.R., **W.T.L. Chow**, M. Georgescu, P. Hyde, G.D. Jenerette, A. Mahalov, M. Moustauoi, and B.L. Ruddell. 2015: "Multiscale modeling and evaluation of urban surface energy balance in the Phoenix metropolitan area." *Journal of Applied Meteorology and Climatology*. 54: 322-338. [DOI:10.1175/JAMC-D-14-0051.1](https://doi.org/10.1175/JAMC-D-14-0051.1) (Open Access)
34. Ruddell, D.M., A.J. Brazel, **W.T.L. Chow**, and A. Middell. 2015: "The Urban Heat Island Effect and Sustainability Science: Causes, Impacts, and Solutions" in K. D. Pijawka (ed.) *Sustainability for the 21st Century: Pathways, Programs, and Policies*: 219-234. Kendall Hunt: Iowa. ISBN: 978-1-4652-6671-2
- a. 2nd Edition (2017)
 - b. 3rd Edition (2020)

2014

35. **Chow, W.T.L.**, F.S. Salamanca, M. Georgescu, A. Mahalov, J.S. Milne, and B.L. Ruddell. 2014: "A multi-method and multi-scale approach for estimating city-wide anthropogenic heat fluxes" *Atmospheric Environment*. 99: 64-76. [DOI:10.1016/j.atmosenv.2014.09.053](https://doi.org/10.1016/j.atmosenv.2014.09.053). (Open Access).
36. **Chow, W.T.L.**, T.J. Volo, E.R. Vivoni, G.D. Jenerette, and B.L. Ruddell. 2014: "Seasonal dynamics of a suburban energy balance in Phoenix, Arizona" *International Journal of Climatology*. 34(15): 3863-3880. [DOI: 10.1002/joc.3947](https://doi.org/10.1002/joc.3947).

37. Ziegler, A.D., J.P. Terry, G.J.H. Oliver, D.A. Friess, J. Chuah, **W.T.L. Chow**, and R.J. Wasson. 2014: "Increasing Singapore's resilience to drought" *Hydrological Processes*. 28(15): 4543-4548. [DOI: 10.1002/hyp.10212](https://doi.org/10.1002/hyp.10212).

2013

38. Chuang, W-C., P. Gober, **W.T.L. Chow**, and J. Golden. 2013: "Sensitivity to heat: A comparative study of Phoenix, Arizona and Chicago, Illinois (2003-2006)" *Urban Climate*. 5:1-18. [DOI: 10.1016/j.uclim.2013.07.003](https://doi.org/10.1016/j.uclim.2013.07.003).
39. Deplet-Barreto, J., C.A. Martin*, A.J. Brazel*, **W.T.L. Chow**, and S.L. Harlan. 2013: "Creating the park cool island in an arid city urban neighborhood: vegetation and extreme heat in Phoenix, Arizona." *Urban Ecosystems*. 16: 617-635. [DOI:1007/s11252-012-0278-8](https://doi.org/10.1007/s11252-012-0278-8)
40. Connors, J.P., C.S. Galletti, and **W.T.L. Chow**. 2013: "Landscape configuration and urban heat island effects: assessing the relationship between landscape characteristics and land surface temperature in Phoenix, Arizona." *Landscape Ecology*. 28(2): 271-283. [DOI: 10.1007/s10980-012-9833-1](https://doi.org/10.1007/s10980-012-9833-1).

2012

41. **Chow, W.T.L.**, D. Brennan, and A.J. Brazel*. 2012: "Urban heat island research in Phoenix, Arizona: theoretical contributions and policy applications." *Bulletin of the American Meteorological Society*. 93(4): 517-530. [DOI: 10.1175/BAMS-D-11-00011.1](https://doi.org/10.1175/BAMS-D-11-00011.1). (Open Access)
42. **Chow, W.T.L.**, W-C Chuang, and P. Gober. 2012: "Vulnerability to extreme heat in metropolitan Phoenix: Spatial, temporal and demographic dimensions." *The Professional Geographer*. 64(2): 286-302. [DOI:10.1080/00330124.2011.600225](https://doi.org/10.1080/00330124.2011.600225).
43. **Chow, W.T.L.** and A.J. Brazel*. 2012: "Assessing xeriscaping as a sustainable heat island mitigation approach for a desert city." *Building and Environment*, 47: 170-181. [DOI:10.1016/j.buildenv.2011.07.027](https://doi.org/10.1016/j.buildenv.2011.07.027).
44. Roth, M. and **W.T.L. Chow**. 2012: "A historical review and assessment of urban heat island in Singapore." *Singapore Journal of Tropical Geography*. 33(3): 381-397. [DOI:10.1111/sjtq.12003](https://doi.org/10.1111/sjtq.12003).
45. Ruddell, D.M., A.J. Brazel*, and **W.T.L. Chow**. 2012: "The Urban Heat Island Effect and Sustainability Science: Causes, Impacts, and Potential Solutions" in K. D. Pijawka and M. Gromulat (eds.) *Understanding Sustainable Cities: Concepts, Cases, and Solutions*: 167-183. Kendall Hunt: Iowa. ISBN: 978-1-4652-0344-1.

2011 and earlier

46. **Chow, W.T.L.** and B.M. Svoma. 2011: "Analyses of nocturnal temperature cooling rate response to historical local-scale urban land-use/land cover change" *Journal of Applied Meteorology and Climatology*. 50: 1872-1883. [DOI: 10.1175/JAMC-D-10-05014.1](https://doi.org/10.1175/JAMC-D-10-05014.1). (Open Access)
47. **Chow, W.T.L.**, R.L. Pope, C.A. Martin*, and A.J. Brazel*. 2011: "Observing and modeling the nocturnal park cool island of an arid city: Horizontal and vertical impacts." *Theoretical and Applied Climatology*. 103(1-2): 197-211. [DOI: 10.1007/s00704-010-0293-8](https://doi.org/10.1007/s00704-010-0293-8).

48. Sun, C.Y., A.J. Brazel*, **W.T.L. Chow**, B.C. Hedquist, and L. Prashad. 2009: "Desert heat island study in winter by mobile transect and remote sensing techniques." *Theoretical and Applied Climatology*. 98(3-4): 323-335. [DOI: 10.1007/s00704-009-0120-2](https://doi.org/10.1007/s00704-009-0120-2).
49. **Chow, W.T.L.** and M. Roth*. 2006: "Temporal dynamics of the urban heat island of Singapore." *International Journal of Climatology*. 26(15): 2243-2260. [DOI 10.1002/joc.1364](https://doi.org/10.1002/joc.1364) (Open Access).

d. Other Publications/Short Articles

2023

1. **Chow, W.T.L.** 2023: "Working with the IPCC: a Singapore boy's view of climate change." in T. Koh, Lye L.H. and S. Lum (eds.) *Peace with Nature – 50 Voices of Singaporeans who love Nature and the Environment*. Invited Book Chapter Submission. World Scientific: Singapore [Forthcoming]

2022

2. **Chow, W.T.L.** 2022: "Developing Climate Resilient Cities: We need to be quicker", 1st June 2022. *Asian Management Insights*. 9(2): 10-16. Invited Commentary. Available from [Asian Management Insights](#) (Online)
3. **Chow, W.T.L.** 2022: "The role of Citizen Science and Engagement in Driving Community Climate Action Towards Climate Resilient Development" in *Building Community Resilience*, Singapore; Centre for Liveable Cities. Pg 70-71. Invited Commentary. Available from [Centre for Liveable Cities](#) (Online)
4. **Chow, W.T.L.** 2022: "Climate Change and Lord of the Rings?" *Our Better World*, 1st June 2022. Invited Commentary. Available from [Our Better World](#) (Online)
5. **Chow, W.T.L.**, R.J. Dawson, B. Glavovic, M. Haasnoot, M Pelling, and W. Solecki. 2022: "Fact sheet - Human Settlements" Intergovernmental Panel on Climate Change Sixth Assessment Report, Working Group II: Impacts, Adaptation and Vulnerability. Available from [IPCC website](#) (online)
6. **Chow, W.T.L.** 2022: "Commentary: Coastal cities like Singapore face outsized risks – and opportunities – in a warming world" 15th March 2022. Invited Commentary. Available from [Channel NewsAsia](#) (online)
7. Schipper, E.L.F., V. Castan-Broto, and **W.T.L. Chow**. 2022: "Five key points in the IPCC report on climate change impacts and adaptation" 3rd March 2022. Invited Commentary. Available from [The Conversation](#) (online)

2021

8. United Nations Environment Programme (UNEP), I. Campbell, S. Sachar, J. Meisel, R. Nanavatty (leads), **W.T.L. Chow**, G. Schmitt, et al. (contributors). 2021: *Beating the Heat: A Sustainable Cooling Handbook for Cities*. Nairobi. Available from: <https://www.unep.org/resources/report/beating-heat-sustainable-cooling-handbook-cities> ([News release](#))

9. **Chow, W.T.L.** 2021: "We're in a climate casino. Here's how to fight against the odds" 25th August 2021. Invited Commentary. Available from [The Straits Times \(online\)](#)
10. **Chow, W.T.L.** 2021: "Commentary: Latest climate change report is the most important by far. Here's why" 10th August 2021. Invited Commentary. Available from [Channel NewsAsia \(online\)](#)

2020

11. Schmitt, G., and **W.T.L. Chow**, 2020: "Commentary: Singapore could be a model for cooler cities in a world heating up" 8th November 2020. Invited Commentary. Available from [Channel NewsAsia \(online\)](#)
12. Philipp, C.H. and **W.T.L. Chow**. 2020: "Urban Heat Vulnerability Analysis for Singapore: D 2.4 – Vulnerability Map" 30th June 2020. Technical Report. Cooling Singapore: Singapore-ETH Centre. Available from [Cooling Singapore \(online\)](#)
[DOI:10.3929/ethz-b-000419689](https://doi.org/10.3929/ethz-b-000419689)
13. **Chow, W.T.L.**, 2020: "Commentary: The wonder of clear skies and returning wildlife is our new climate problem" 24th May 2020. Invited Commentary. Available from [Channel NewsAsia \(online\)](#)
14. **Chow, W.T.L.**, 2020: "Commentary: Reaching net-zero emissions will be 'very challenging'. But watch Singapore try anyway" 7th March, 2020. Invited Commentary. Available from [Channel NewsAsia \(online\)](#)
15. **Chow, W.T.L.**, 2020: "Singapore's climate action: It is time to be more ambitious" 6th March, 2020. Commentary. Available from [The Business Times \(online\)](#) and [SMU Libraries](#)

2019

16. **Chow, W.T.L.**, 2019: "Commentary: How effectively can Singapore adapt to sea level rise?" 25th August 2019. Invited Commentary. Available from [Channel NewsAsia \(online\)](#)

2018

17. **Chow, W.T.L.**, 2018: "How vulnerable is Singapore to climate change?" *The Straits Times*, Thursday 6th September 2018: B8. Invited Science Talk feature. Available from [The Straits Times \(online\)](#)
18. Voogt, J.A., and **W.T.L. Chow**, 2018: "CitiesIPCC in Edmonton turns the spotlight on urban areas." *Urban Climate News*, 67 (Mar 2018): 34-36. Available from <http://urban-climate.org/newsletters/IAUC067.pdf>

2016 and earlier

19. **Chow, W.T.L.**, 2016: "Implications of Global Climate Change on Southeast Asia" *Geography Digest*, Vol 2: 1-6. Humanities Branch, Curriculum Planning and Development Division 2, Ministry of Education

20. **Chow, W.T.L.**, 2015: "[How climate change will affect transboundary haze](#)" *TODAY*, Thursday 8th October 2015: 19-20. Op-ed commentary.
21. **Chow, W.T.L.**, 2014: "[Extreme weather events: Is climate change to blame?](#)" *The Straits Times*, Friday 12th December 2014: A31. Invited Op-ed.
22. Kaplan, S., C.S. Galletti, **W.T.L. Chow**, S.W. Myint, and A.J. Brazel. 2014: "Modeling directional albedo with high resolution imagery" *Urban Climate News*, 51 (Mar 2014): 7-12. Available from <http://urban-climate.org/newsletters/IAUC051.pdf>
23. **Chow, W.T.L.** 2013: "Urban climate in the news media: a retrospective review" *Urban Climate News*, 50 (Dec 2013): 2-3. Available from <http://urban-climate.org/newsletters/IAUC050.pdf>
24. Earl, S.R., A.J. Brazel, **W.T.L. Chow**, and D.M. Ruddell. 2010: "Twenty years of Climate Change in the Phoenix Metropolitan Area and McDowell Sonoran Preserve" *Mountain Lines*, 17(4): 10-11.
25. **Chow, W.T.L.**, 2010: "A brief survey of stadium microclimates and sports" *Urban Climate News*, 36 (Jun 2010): 2-4. Available from <http://urban-climate.org/IAUC036.pdf>
26. **Chow, W.T.L.**, 2009: "Conference Report: Urban Climates in Sin City: The 2009 AAG Annual Meeting in Las Vegas, March 22-27, 2009" *Urban Climate News*, 32 (Jun 2009): 26-27. Available from <http://urban-climate.org/IAUC032.pdf>
27. **Chow, W.T.L.**, 2008: "Beijing Olympics – an experiment in controlling urban air pollution?" *Urban Climate News*, 29 (Sep 2008): 2-4. Available from <http://urban-climate.org/IAUC029.pdf>
28. Roth, M. and **Chow, W.T.L.**, 2007: "Country report: UHI research in Singapore." *Urban Climate News*, 24 (Aug 2007): 7-11. Available from <http://urban-climate.org/IAUC024.pdf>

e. Research Interviews & Other Recorded Media

2022

1. APAC Network, 2022: "Technology led solutions: Sustainability Leaders Series" Recorded Interview. 6th October 2022. Available from [APAC Network](#).
2. BBC Newsday, 2022: "Why is Japan having its worst ever heatwave?" Live Radio Interview with the BBC World Service. 29th June 2022. Available from [BBC Online](#).
3. Nordic Institute of Asian Studies, 2022: "Urban Climate Change and Adaptation: Messages from the IPCC Report for Southeast Asia" *Nordic Asia Podcast*. Recorded podcast interview. 4th April 2022. Available from [Nordic Asia online](#)
4. Liang, L. 2022: "Relentless work, for no money: Southeast Asian climate scientists share their IPCC experience" *Eco-Business: The EB Podcast* Recorded podcast interview. 22nd March 2022. Available from [Eco-Business](#) Online

2021

5. **Chow W.T.L.** 2021: "COP26 reflections" *Asia First* Live Radio interview. November 15th 2021. Available from [CNA938 Live](#)
6. **Chow, W.T.L.** 2021: "The Climate Conversations - S2: It's a 'code red for humanity', but what next after the IPCC's latest report on the health of our planet? | EP 45" 20th August 2021. Podcast. Available from [Channel NewsAsia \(online\)](#)
7. **Chow W.T.L.** 2021: "IPCC 6th Assessment Report release" *Asia First* 10th August 2021. Live radio interview. Available from [CNA938 Live](#)
8. Zheng, Z. 2021: "58 years after S'pore last water rationing exercise, some might be taking clean water for granted." Profile Feature. Available from [Mothership](#)

2020

9. **Chow, W.T.L.**, 2020: "The Climate Conversations: Getting down to the big picture science of climate change | EP 1" 21st August 2020. Podcast. Available from [Channel NewsAsia \(online\)](#)
10. **Chow, W.T.L.**, 2020: "COVID-19 and Climate Change" *Singapore Today*. Live Radio Interview 5th October 2020. Available from [CNA938Live](#)
11. **Chow, W.T.L.**, 2020: "S'porean climate scientist compares climate change to S'pore football — things are tough & hard to solve" 15th February 2020. In-depth interview. Available from [Mothership \(online\)](#)
12. **Chow, W.T.L.**, 2020: "Things you always wanted to ask: A climate scientist" 7th January 2020. Video interview. Available from [Mothership \(online\)](#)
13. **Chow, W.T.L.**, 2020: "Expert explains: Extreme Weather" 10th February 2020. Video interview. Available from [Mothership \(online\)](#)
14. **Chow, W.T.L.**, 2020: "Keeping cool in a world on fire: Green Pulse Ep 14" 22nd January 2020. Podcast. Available from [The Straits Times \(online\)](#)

2019 and earlier

15. **Chow, W.T.L.**, 2019: "Perspectives: Interview with Winston Chow". 1st October 2019. Video interview. Available from [Eco Business TV \(online\)](#)
16. **Chow, W.T.L.**, 2019: "Adopting sustainable urban development measures for continued economic growth" 1st October 2019 Podcast. Available from [SMU Engage \(online\)](#)
17. **Chow, W.T.L.**, 2019: "Weathering the storm better" Wednesday, 16th October 2019. In-depth interview. Available from [Business Times \(online\)](#)
18. Tan, A., 2018: "Singapore don't take part in international climate report" 30th April 2018. Profile Feature. Available from [The Straits Times \(online\)](#)

f. Research Presentations, Public Talks, and Conference Proceedings

2023

1. **Chow, W.T.L.** 2023: "Adaptation Policy, Finance, Community." Intergovernmental Panel on Climate Change (IPCC) Outreach Event – Climate Change: resilience, transformation and equity. Bangkok, Thailand. 28th April 2023 [Invited Speaker and Panellist](#).
2. **Chow, W.T.L.** 2023: "How to cool an overheating Asian city? Stories from the Cooling Singapore Initiative." Thammasat Design School Lecture Series. Thammasat University Rangsit Campus. Bangkok, Thailand 24th April 2023. [Invited Speaker](#)
3. Lai, K.P.Y, F. Liu, and **W.T.L. Chow**. 2023: "Workshop: Green Fintech and Data Centres." Singapore Green Finance Centre. Singapore Management University. 19th April 2023. [Workshop Organiser and Speaker](#).
4. **Chow, W.T.L.**, M. Cheong, and M. Tan. "Climate Change" in "*SME CEO Connection: Navigating a Dangerous World*" Heliconia Capital Management, Shangri-La, Singapore. 14th April 2023. [Invited Moderator](#).
5. **Chow, W.T.L.**, G. Williams, F. Zimmermann, and A. Zaw. "Insights from COP27 & COP15 and its Implications for the Board" Climate Governance Singapore. 4th April 2023. [Invited Speaker and Panellist](#).
6. **Chow, W.T.L.** 2023. Invited panel talks at three United Nations 2023 Water Conference Side Events as Singapore Government delegate.
 - a. "[Pathways Forward: Water-resilient, Sustainable and Inclusive in Asia and the Pacific](#)" 22nd March 2023
 - b. "[The Freshwater Challenge – Mobilising Action to Restore Freshwater Ecosystems](#)" 23rd March 2023
 - c. "[Water, Technology, and Sustainable Development](#)" 23rd March 2023
7. **Chow, W.T.L.** 2023. "Sustainability & management in a climate disrupted world: A post COP27 update" Strategic Leadership Masterclass, Office of Alumni Relations and Executive Development. Singapore Management University. 5th January 2023. [Invited Speaker](#).

2022

8. **Chow, W.T.L.**, Z. Zaiton Ibrahim, J. Roy, and C. Singh. 2022: "Developing Climate Resilient Cities in Asia: The How's, Why's and So What's" Cities & Built Environment Day, Singapore Pavilion 7th November 2022. Climate Conference of Parties (COP27). [Invited Oral Moderator](#).
9. E. An, **W.T.L., Chow**, M. Koh, J. Lam, L. Sorkin. 2022: "Enhancing Cities' Liveability and Sustainability in the Face of Climate Change" Cities & Built Environment Day, Singapore Pavilion 7th November 2022. Climate Conference of Parties (COP27). [Invited Oral Panellist](#).
10. **Chow, W.T.L.**, S. Bell, S. Marvin, L. Rickard, and A. Trundle. 2022: "Plenary Panel #3: Can City Research Solve Difficult Global Challenges?" Difficult Urban Questions Cities@Melbourne Symposium 7th October 2022. University of

Melbourne Centre for Cities. [Invited Oral Panellist](#).

11. K.P.Y Lai and **W.T.L. Chow**. 2022: “How ‘green’ is green FinTech? A critical enquiry into the growth of data centres in Southeast Asia” Luxembourg Institute of Social-Economic Research (LISER) Seminar Series. 13th September 2022. [Invited Co-presenter; hybrid presentation](#)
12. **Chow, W.T.L.** 2022: “Masterclass: Climate-resilient Cities of the Future” SMU Asia Summit. 11th August 2022. Singapore Management University. [Invited Oral Presenter](#).
13. **Chow, W.T.L.** 2022: “Enabling Climate-Resilient Development in Cities & the Singapore Green Plan 2030” World Cities Summit 2022 – Science of Cities Symposium. Centre for Liveable Cities, Singapore. Marina Bay Sands Convention Centre, 31st July 2022. [Invited Oral Presenter and Panellist](#)
14. **Chow, W.T.L.** 2022: “Accelerating a Sustainable Transition to Avert a +2°C world” Keynote Speech, Youth Ecosperity Dialogue. Temasek Foundation and Singapore Management University. Singapore Management University Hall. 6th June 2022. [Invited Keynote Speaker](#)
15. **Chow, W.T.L.** 2022: “Urban climate risks in the IPCC AR6” Asia-Pacific Urban Climate Meetings, University of New South Wales, Australia. 25th May 2022. Virtual Presentation.
16. **Chow, W.T.L.** 2022: “Land Administration and Urban Climate Change Adaptation & Mitigation” International Seminar on United Nations Global Geospatial Information Management. Singapore Land Authority, Suntec City Convention Centre, Singapore. 17th May 2022. [Invited Speaker and Panellist](#).
17. **Chow, W.T.L.** 2022: “The challenge of a +2°C world for urban climate science and policy – notes from Singapore” Hong Kong University of Science and Technology Sustainability Seminar Series Spring 2021/2022. 6th May 2022. [Invited Speaker Virtual Presentation](#)
18. **Chow, W.T.L.** 2022: “The IPCC AR6 WGII report: What does it mean for Singapore?” Singapore Green Plan Conversation on Resilient Future Pillar, Ministry of Sustainability and Environment, Singapore. 25th March 2022. Invited Speaker and Panellist. [Virtual Presentation](#).
19. **Chow, W.T.L.** and V. Castan-Broto. 2022: “IPCC Report Release: Climate + Justice + Cities Speaker Series” School of Cities, University of Toronto. 10th March 2022. [Virtual presentation](#)

2021

20. Bhardwaj, A., R.J. Wasson, **W.T.L. Chow**, and A.D. Ziegler. 2021: “High-Intensity Monsoon Rainfall Variability and its Attributes in Upper Ganges Catchment in the Indian Himalaya during 1901–2013” American Geophysical Union Fall Meeting 2021. 16th December 2021. [Poster Presentation](#).
21. **Chow, W.T.L.** 2021: “Climate Ready Cities: How does Singapore prepare for climate change?” Temasek Foundation Future of Governance in Southeast Asia: Climate Change. Civil Service College, Singapore. 8th December 2021. Invited

Guest Lecture.

22. **Chow, W.T.L.** 2021: “Academic Panel 1: Energy, Technology and the Environment.” *Sustainable Development and Commerce in ASEAN Cities*. ASEAN Law Research Network: Legal Blueprints Conference Series. Singapore. 12 November 2021. [Invited Moderator \(Live recording\)](#).
23. **Chow, W.T.L.** 2021: “Sharing of COP26 outcomes” Voices from COP26: Why it matters to businesses in Singapore. World Wildlife Fund – Singapore. 25th November 2021. [Invited Speaker](#).
24. **Chow, W.T.L.** 2021: “The urban science and policy challenge in a 2°C+ world – notes from Singapore” 19th November 2021. Early Career Researchers. Future Earth: Taipei. [Invited Speaker](#).
25. **Chow, W.T.L.** 2021: “Technology & innovation for enabling urban climate solutions” Lee Kuan Yew Senior Fellowship in Public Service Programme (SF3). Lee Kuan Yew School of Public Policy, National University of Singapore. 18th November 2021. [Invited Guest Lecture](#).
26. **Chow, W.T.L.** 2021: “COP26 Summit: Reflections” Environment and Sustainability Committee Webinar Series. American Chamber of Commerce – Singapore, Singapore. 16th November 2021. [Invited Panellist](#).
27. **Chow, W.T.L.** 2021: “The Need for Food Tech in Today’s World.” Green Market: SG Food Tech Fest. Asia Sustainability Forum and National Library Board. Singapore. 12th November 2021. [Invited Speaker](#).
28. **Chow, W.T.L.** 2021: “Understanding the climate challenge: Panel Discussion” Launch of Climate Governance Singapore, Singapore. Climate Governance Initiative. 28th October 2021. [Invited Panellist](#).
29. **Chow, W.T.L.** 2021: “Global Cooling Handbook announcement” *Innovate for Cities Conference*. United Nations-Habitat and the Global Covenant of Mayors for Climate & Energy. 11th October 2021. [Invited Speaker \(Live recording\)](#)
30. **Chow, W.T.L.** 2021: “Plenary 2 - Adaptation and resilience as integrated approaches to tackling climate change” *Innovate for Cities Conference*. United Nations-Habitat and the Global Covenant of Mayors for Climate & Energy. 12th October 2021. [Invited Speaker \(Live recording\)](#).
31. **Chow, W.T.L.** 2021: “Climate Change, Culture and Economy” Singapore Business Series: Reimagining business in the Green Economy. Singapore Pavilion, World Expo. Dubai. 6th October 2021. [Invited Speaker \(Live recording\)](#)
32. **Chow, W.T.L.** 2021: “Urban bio-meteorological risks from climate change: An Asian perspective” Connecting Our World: International Congress of Biometeorology. 22nd September 2021. [Invited Plenary Session Talk](#).
33. Ching, G; S.K. Yik, A.J. Tan, Y. Dzyuban, P.J. Crank, S. Banerjee, and **W.T.L. Chow** 2021: “Sentiment Analysis of Weather-related Tweets in Hot Climates” Connecting Our World: International Congress of Biometeorology. 21st September 2021. [Poster Presentation](#).

34. **Chow, W.T.L.** 2021: “SMU x NLB Series: Building Climate Resilient Cities” Singapore Management University and National Library Board, Singapore. 9th September 2021. [Invited Moderator](#).
35. **Chow, W.T.L.** 2021: “Conversation with Ambassadors: Extraordinary human effects on the lives and histories of Earth.” Diverse City: Internationalisation at Home. Singapore Management University, Singapore. 3rd September 2021. [Invited Moderator](#) ([Live Recording](#)).
36. **Chow, W.T.L.** 2021: “Urban areas in the IPCC AR6 WGI report” IPCC Ar6 – What does it mean for Singapore? Ministry of Sustainability and Environment. 31st August 2021. [Invited Speaker](#) ([Live recording](#)).
37. **Chow, W.T.L.** 2021: “Stopping climate change requires more than just science!” Dunman High School Distinguished Speaker Series. Singapore. 4th August 2021. [Invited Speaker](#).
38. **Chow, W.T.L.** 2021: “SG Green Plan: a resilient future? The Singapore Green Plan 2030 (SGP2030): Opportunities and Challenges in Achieving Environmental Sustainability” Ministry of Education Dialogue Session with Humanities Scholars. Singapore. 16th July 2021. Invited Speaker.
39. **Chow, W.T.L.** 2021: “Plenary Session 2 – Role of Leadership in Developing the Built Environment Business Ecosystem” BuildSG LEAD Summit 2021. Building and Construction Authority, Singapore. 28th April 2021. [Invited Moderator](#) ([Live Recording](#)) .
40. **Chow, W.T.L.** 2021: “The challenges of estimating urban climate risks & vulnerability” Climate Risk Virtual Dialogue Series – Singapore Actuarial Society. Singapore. 25th June 2021 [Invited Talk](#),
41. **Chow, W.T.L.** 2021: “Combatting urban heat stress: A Singapore case study” I2P.17 Adaptation in South East Asian Cities: Solutions for Heat Stress, Flooding & Planning an Integrated Vision for the Future. *Singapore International Water Week*. Singapore. 30th June 2021. [Invited Talk](#).
42. **Chow, W.T.L.** 2021: “Net Zero: The hows, whys, and challenges” Road to Net Zero: Keppel Corporation. Singapore 10th June 2021. Invited Speaker.
43. **Chow, W.T.L.** 2021: “Sustainability Exchange: The Showcase” EB Impact, Facebook, and Climate Action SG Alliance. Singapore. 25th May 2021. [Invited Speaker](#) and Judge ([Media Coverage](#)).
44. **Chow, W.T.L.** 2021: “Urban heat adaptation and mitigation: What does the future hold for Singapore?” Heat in Urban Asia: Past, Present, and Future. Asia Research Institute, National University of Singapore. Singapore. 21st April 2021. [Invited Speaker](#).
45. **Chow, W.T.L.** 2021: “Sustainability, climate change, and standards: Pathways to consider” Enterprise Singapore Quality and Standards Partners Appreciation Event 2021. Singapore. 20th April 2021. [Invited Speaker](#).
46. **Chow, W.T.L.** 2021: “What can scientific research tell us about stopping climate change?” Can We Stop Climate Change? Conversations for Awareness on Religion and the Environment (CARE) Series. Singapore. 11th April 2021. [Invited](#)

[Speaker \(recorded\)](#),

47. **Chow, W.T.L.** 2021: “Passive and Active Strategies for Cooler, Sustainable Cities” SGBC-BCA Webinar: Creating Sustainable Districts through Climate-Responsive Design. Singapore Green Building Council. Singapore. 24th March 2021. [Invited Lecture](#).
48. **Chow, W.T.L.** 2021: “Water in urban Singapore: Past, present and future” SMU Verts x PUB World Water Day talk. 19th March 2021. Singapore. [Invited Talk](#) (Note: Report on event from [Mothership Singapore](#)),
49. **Chow, W.T.L.** 2021: “Fighting Climate Change with Clean Energy” [SMU Growing Infrastructure Executive Development Course](#) – Enabling & Structuring for Private Sector Participation in Finance and Innovation. Singapore. 15th March 2021. Guest Lecture ,
50. **Chow, W.T.L.** 2021: “Climate Hack 2021: Climate risks in cities & urban adaptation” 13th March 2021. Singapore International Foundation & Code for Asia. Singapore. [Invited Speaker](#).
51. **Chow W.T.L.** 2021: “Why is communication so important for climate change education?” National Institute of Education Singapore Kaleidoscope Symposium – “Challenges and Opportunities for Singapore of the future.” Singapore. 24th February 2021. Invited Guest Lecture.
52. **Chow, W.T.L.** 2021: “Panel 1: The Climate Crisis. Local perspectives on Global Problems.” 5th Annual Wee Kim Wee Soka International Seminar on Global Peace and Understanding. Singapore Management University, Singapore. 21st January 2021. [Invited Moderator \(Live recording\)](#).

2020

53. Santos, B.P. and **W.T.L. Chow**. 2020: “Changemakers Conversations: Urban Sustainability” Institute of Innovation & Entrepreneurship. Singapore Management University. Singapore, Singapore. 9th December 2020. [Co-moderator for panel discussion & online webinar](#)
54. **Chow, W.T.L.** 2020: “What climate risks does SE Asia face over the next thirty years?” [London School of Economics and Political Science Southeast Asia Week 2020: Environmental Resilience and Southeast Asia](#). 26-30 October. London, United Kingdom. Invited Paper & [Online Presentation](#).
55. Lynn, J., A. Purbo, **W.T.L. Chow**, and L.Y. Sulistiawati. 2020: “APCEL-IPCC Webinar: Debunking the Myths About the IPCC” Asia-Pacific Centre for Environmental Law, National University of Singapore, Singapore. 3rd September 2020. Invited speaker & [Online Presentation](#).
56. **Chow, W.T.L.**, L.P. Koh, and H. Neo. 2020: “COVID-19: The Circuit Breaker of Unsustainable Practices” Sustainable.org 30th May 2020. Singapore. Invited Panellist & [Online Webinar](#)
57. **Chow, W.T.L.**, 2020: “Climate and COVID: Has anything changed?” [#SGStem Talk & Trivia](#) 29th May 2020. Singapore, Singapore. Invited Oral Presentation. [Online presentation](#)

2019

58. Sin, H.L. and **W.T.L. Chow**. 2019: "Singapore's home, sanctuary and heritage: Environmental perception within Wildlife Reserve." ATLAS SIG Meeting and Conference: Heritage Tourism and Education Integrating Cultural and Natural Heritage in Urban Tourism: Innovations, Discourses and Collaborations. 21-22 November. Macao SAR, China. Paper Presentation.
59. **Chow, W.T.L.** 2019: "Impact of sea level rise on ASEAN countries" National University of Singapore Centre for International Law Roundtable on Sea Level Rise and International Law, 14–15 November. Singapore, Singapore. Paper Presentation & Invited Panellist.
60. Molina, L., A. Parker...**W.T.L. Chow**, et.al. "Towards an interdisciplinary knowledge community on the critical understanding of emergent climate system intervention technologies in Southeast Asia" Hong Kong University of Science and Technology, Boston University, and the Solar Radiation Management Governance Initiative (SRMGI). 8-9 November. Bali, Indonesia. Invited Workshop Delegate (20 participants).
61. **Chow, W.T.L.** 2019: "Future-proofing cities for climate change: How sustainability matters" Singapore Green Building Council Leadership Conversations 2019. 5th November. Singapore, Singapore. Special Invited Paper Presentation & Panellist.
62. Brail, S., G. Chua, L.L. Heng, and **W.T.L. Chow**, 2019: "Are there lessons from the region or overseas that can offer a path forward for Singapore (and other global cities) for businesses under the age of climate disruption?" in "Inspiring Solutions: Growing Green" Singapore Management University City Dialogues 24-25 October. Singapore, Singapore. [Panel Moderator](#).
63. Barrett, K. **W.T.L. Chow**, G. Flato, A. Moksitt, E. Källén, L. Lee, E. Ho, and L. Kong. 2019: "Symposium on Sea Level Rise in Southeast Asia" Intergovernmental Panel on Climate Change and Singapore Management University, 23rd October. Singapore, Singapore. Invited Panellist. Panel Presentation. Video and Slides available at [Intergovernmental Panel on Climate Change](#)
64. Siemiatycki, M., M. Fox, S. Brail.... **W.T.L. Chow**, et al. "Global Urban Network: Inaugural Meeting" School of Cities, University of Toronto, 16-18 October. Toronto, Canada. Invited Delegate (30 participants). News feature [available at University of Toronto](#).
65. **Chow, W.T.L.** 2019: "Considering a 2°C world in Southeast Asia" Decoding the Paris Rulebook for Southeast Asia: Implementation and its Challenges, Centre for International Law, National University of Singapore. 1-2 October. Singapore, Singapore. Paper Presentation & Invited Panellist.
66. **Chow, W.T.L.** 2019: "The Challenge of Keeping Singapore Cool" 1st Sustainable Tropical Urbanism Symposium: Tropical cities in a warming world. James Cook University – Singapore. 27 September. Singapore, Singapore. Paper presentation.
67. **Chow, W.T.L.** 2019: "Climate Change & Singapore – Science & Impacts" Temasek International Investor Presentation. 13 September. Singapore,

Singapore. Invited Paper Presentation

68. Schmitt, G., A. Tan, Y. Yan, **W.T.L. Chow**, and M. Leong, 2019: "Building and Cooling Singapore in an Era of Climate Change." Centre for Liveable Cities Lecture Series. 8th August. Singapore, Singapore. Invited Panellist. Video available [online at Centre for Liveable Cities](#).
69. Meili, N., G. Manoli, P. Burlando, **W.T.L. Chow**, A.M. Coutts, E. Daly, K.A. Nice, M. Roth, N.J. Tapper, E. Velasco, E.R. Vivoni, and S. Fatichi "Vegetation biophysical and ecophysiological properties mediating urban microclimate and water fluxes: A modelling study" Asia Oceania Geosciences Society. 16th Annual Meeting, July 28 - August 2. Singapore. Singapore. Poster Presentation.
70. **Chow, W.T.L.**, S-L. Heng, R. Oh, and C. Kho. 2019: "How do vegetation characteristics affect visitor comfort within tropical urban parks? Results from the Singapore Botanic Gardens and Bishan-Ang Mo Kio Park." National Parks Board, Centre of Urban Greenery and Ecology Seminary, 25 May. Singapore, Singapore. Invited Paper Presentation.
71. Goodell, J. and **W.T.L. Chow** 2019: "The Water Will Come: Rising Seas, Sinking Cities, and the Remaking of the Civilized World" Centre for Liveable Cities Lecture Series. 10th May. Singapore, Singapore. Moderator. Video available [online at Centre for Liveable Cities](#).
72. **Chow, W.T.L.**, S-L. Heng, R. Oh, C. Kho, and A.Y.M. Lim. 2019: "Comparison of outdoor thermal indices in urban parks: which index is most 'accurate'?" American Association of Geographers Annual Meeting, 3 -7 April. Washington D.C., U.S.A. Poster presentation.
73. Verlinde, J., N.S. Tan, and **W.T.L. Chow** 2019: Living with Water: Lessons from Rotterdam" Centre for Liveable Cities Lecture Series. 12th February. Singapore, Singapore. Moderator. Video available [online at Centre for Liveable Cities](#).
74. **Chow, W.T.L.**, S-L. Heng, R. Oh, and C. Kho. 2019: "Reducing Heat Risks through Large Urban Parks – Direct and Indirect Benefits from a Tropical Case Study" 99th American Meteorological Society Annual Meeting. 6-10 January. Phoenix, Arizona, USA. Poster Presentation.

2018

75. **Chow, W.T.L.**, R. Oh, C. Kho, and S. L. Heng. 2018: "The Influence of Vegetation Configuration and Composition towards Outdoor Thermal Comfort within Tropical Urban Parks" American Geophysical Union Fall Meeting, 10-14 December. Washington D.C., United States of America. Paper Presentation.
76. **Chow, W.T.L.**, L. Cheah, D. Fogarty, and R. Pathek (Moderator). "Climate change: costs and consequences" in *The Straits Times Global Outlook 2019* 28th November 2018. Singapore, Singapore. [Invited Panel Discussant](#).
77. **Chow, W.T.L.**, S. L. Heng, R. Oh, and C. Kho. 2018: "The influence of vegetation configuration on outdoor thermal comfort within tropical urban parks" European Geosciences Union General Assembly 2018, 9-13 April. Vienna, Austria. Poster Presentation.

78. Kohler, M., and **W.T.L. Chow**. 2018: "What can individual walking patterns tell us about outdoor thermal comfort sensation in tropical cities?" European Geosciences Union General Assembly 2018, 9-13 April. Vienna, Austria. Poster Presentation.
79. **Chow, W.T.L.** 2018: "Local-scale urban climate and flood regulation within a Singapore city green-space: A case study of Bishan-Ang Mo Kio Park" Cities & Climate Change Science Conference (CitiesIPCC), 5-7 March 2018. Edmonton, Canada. Poster Presentation.
80. Heng, S. L., and **W.T.L. Chow**. 2018: "How "hot" is too hot? Evaluating acceptable ranges of outdoor thermal comfort in an equatorial urban park" 25th AMOS National Conference and 12th International Conference for Southern Hemisphere Meteorology and Oceanography, AMOS-ICSHMO 2018, 5-9 February 2018. Sydney, Australia. Paper Presentation.

2017

81. Heng, S. L., and **W.T.L. Chow**. 2017: "Thermal (dis)comfort experienced from physiological movements across indoor, transitional and outdoor spaces in Singapore: A pilot study" European Geosciences Union General Assembly 2017, 23-28 April. Vienna, Austria. Poster Presentation.
82. **Chow, W.T.L.** 2017: "Geographies of Asian Urban Climates: Past, present, future?" Annual Meeting of the American Association of Geographers. Boston, Massachusetts, USA. Paper Presentation.

2016

83. Gober, P., D.A. Sampson, R. Quay, D. D. White, and **W.T.L. Chow**. 2016: "Urban adaptation to mega-drought: Anticipatory water modeling, policy, and planning in Phoenix" Fall Meeting of the American Geophysical Union, San Francisco, California. Invited paper presentation.
84. **Chow, W.T.L.** 2016: "Urban Resilience Towards Extreme Weather Events: A Current Southeast Asian Perspective" Institute for Water Policy Research Seminar, Lee Kuan Yew School of Public Policy, 31 October. Singapore. Paper Presentation.
85. **Chow, W.T.L.**, A. K. Biswas, V. Babovic, R.J. Wasson, and P. Edwards. 2016: Invited Panellists on "Policies and Governance to Enhance Urban Water Resilience in Singapore" for the Singapore International Water Week: Water Convention 2016. 10-14 July 2016. Marina Bay Sands, Singapore. Panel Presentation.
86. **Chow, W.T.L.** 2016: "The impact of extreme weather events towards urban resilience" Conference on "Urban resilience: the impacts of droughts and floods" Lee Kuan Yew School of Public Policy 8-10 July 2016. Invited Paper Presentation.
87. **Chow, W.T.L.** and D.X.Q. Ho. 2016: "Investigating the vertical dimension of Singapore's urban heat island through quadcopter platforms: a pilot study" European Geosciences Union General Assembly 2016, 17-22 April. Vienna, Austria. Paper Presentation.

88. **Chow, W.T.L.** 2016: "“Why is Singapore so hot?” A beginner’s guide to estimating thermal discomfort in Singapore” Urban Microclimate: Opportunities & Challenges Workshop @ HDB Centre of Building Research, 14 April 2016, Singapore. Paper Presentation.
89. **Chow, W.T.L.** 2016: "Spatial variations in urban thermal comfort and its influence on sporting performance in a tropical city" Annual Meeting of the American Association of Geographers. San Francisco, California, USA. Paper Presentation.

2015 and earlier

90. **Chow, W.T.L.** 2015: "Responding to Rare Weather-related Events in a Tropical Metropolis: A Case Study of the Singaporean Approach Towards Recent Haze and Drought Incidences" 95th American Meteorological Society Annual Meeting. Phoenix, Arizona, USA. Paper Presentation.
91. **Chow, W.T.L.** 2014: "Geography's importance in past, present and future of tropical urban climatology" 12th Southeast Asian Geography Association (SEAGA) International Conference. Siem Reap, Cambodia. Paper Presentation.
92. **Chow, W.T.L.** 2014: "Present and Future Perspectives on Sustainable Urban Climates" Lee Kuan Yew Centre for Innovative Series, LKY CIC Brown Bag Lunch Series, Singapore University of Technology and Design. Singapore. Oral Presentation.
93. **Chow, W.T.L.**, and S. N. A. bte A. Akbar. 2014: "Influence of land cover on microscale outdoor human thermal comfort in a tropical city" 2nd International Urbanization and Global Environmental Change (UGEC) Conference. Taipei, Taiwan. Paper Presentation.
94. **Chow, W.T.L.**, A. Durnbaugh, S. Gaffin, and T. Motte. 2014: Invited Panellists on "The Urban Micro-Climate" for the Yale Urban Ecosystem Services Symposium: New Tools to Guide Ecosystem Management in an Urbanizing World. School of Forestry and Environmental Studies, Yale University. New Haven, Connecticut. Panel Presentation.
95. Ruddell, B.L., and **W. T. L. Chow**, 2014: "Microclimate analysis of observations in a master-planned residential community in Arizona." CAP-LTER Sixteenth Annual Poster Symposium and All Scientists Meeting, Scottsdale, Arizona. Poster Presentation
96. **Chow, W.T.L.** 2013: "But it’s a dry heat!" – The heat island and its influence on sustainable urban climate development in Phoenix, AZ." Department Seminar Series, Department of Geography, National University of Singapore, Singapore. Paper presentation
97. Shaffer, S.R., B.L. Ruddell, **W.T.L. Chow**, M. Moustouai, A. Mahalov, M. Georgescu. 2013: "Evaluation of WRF for fine scale surface energy balance modeling in Phoenix." 14th Annual WRF User’s Workshop, Boulder, Colorado. Poster presentation
98. **Chow, W.T.L.** and B.L. Ruddell. 2013: "Initial results from detailed microclimate observations taken within a planned residential community in Phoenix, AZ." Annual Meeting of the Association of American Geographers, Los Angeles, California. Poster presentation

99. Kaplan, S, C.S. Galletti, and **W.T.L. Chow**. 2013: "Estimation of High Resolution Land Surface Broadband Albedo for Urban Area from Quickbird" CAP-LTER Fifteenth Annual Poster Symposium and All Scientists Meeting, Scottsdale, Arizona. Poster Presentation
100. **Chow, W.T.L.**, T.J. Volo, E.R. Vivoni, G. D. Jenerette, and B.L. Ruddell. 2012: "Observations of the urban land surface energy balance in a Phoenix, AZ, residential suburb." Fall Meeting of the American Geophysical Union, San Francisco, California. Poster Presentation
101. Ruddell, B.L., G.D. Jenerette, M. Moustouai, E.R. Vivoni, **W.T.L. Chow**, S. Shaffer, T. J. Volo, C.A. Martin, A. Mahalov and S.L. Harlan. 2012: "Modeling the Urban Climate at the Human Scale in Hot/Dry Regions" Fall Meeting of the American Geophysical Union, San Francisco, California. Poster Presentation
102. Halperin, T., **W.T.L. Chow**, and J. Declet-Barreto. 2012: "Mitigating urban heat island by predicting impacts of urban parks/open space." American Society of Landscape Architects Annual Meeting and Expo, Phoenix, Arizona. Paper Presentation
103. Childers, D. **W.T.L. Chow**, S. Davies, S. Earl, N.B. Grimm, R. Hale, A. Hamilton, M. Nation, and L. Turnbull. 2012: "Central Arizona – Phoenix Long-Term Ecological Research." Long-Term Ecological Research (LTER) All Scientists Meeting, Estes Park, Colorado. Poster Presentation
104. **Chow, W.T.L.** and A.J. Brazel. 2010: "Urban heat island research in Phoenix, Arizona: A historical overview and future challenges to sustainability and climate change." Annual Meeting of the Association of American Geographers, Washington, District of Columbia. Paper presentation
105. **Chow, W.T.L.**, W-C Chuang, and P. Gober. 2009: "Vulnerability to extreme heat in Metro Phoenix: Spatial, temporal and demographic dimensions." Annual Meeting of the Association of American Geographers, Las Vegas, Nevada. Poster presentation
106. **Chow, W.T.L.**, and R. L. Pope. 2009: "Modeling micro-scale park-cooling effects within the ASU campus: An evaluation of the Envi-Met climate model." CAP-LTER 11th Annual Poster Symposium, Arizona State University, Tempe, Arizona. Poster presentation
107. **Chow, W.T.L.** 2008: "The impact of rural thermal admittance on the UHI of Singapore." Annual Meeting of the Association of American Geographers, Boston, Massachusetts. Poster presentation
108. **Chow, W.T.L.** 2007: "Urban climate research in Phoenix – SEB observations and MM5/WRF modeling." Baltimore Ecological Systems – Long-term Ecological Research workshop on Urban Atmospheres. University of Maryland-Baltimore Campus, Baltimore, Maryland. Paper presentation
109. **Chow, W.T.L.**, M. Roth, and A.J. Brazel. 2007: "A review of canopy-level tropical and subtropical urban heat islands." Annual Meeting of the Association of American Geographers, San Francisco, California. Paper presentation

110. **Chow, W.T.L.** 2004: "The spatial form and temporal dynamics of the urban heat island of Singapore." Department Seminar Series, Department of Geography, National University of Singapore, Singapore. Paper presentation
111. **Chow, W.T.L.**, and M. Roth. 2004: "Historical progression and geographical contribution of urban climate studies in Singapore." Annual Meeting of the Association of American Geographers, Philadelphia, Pennsylvania. Paper presentation
112. **Chow, W.T.L.**, and M. Roth. 2003: "Observations and analysis of the urban heat island in Singapore." Fall Meeting of the American Geophysical Union, San Francisco, California. Paper presentation
113. Roth, M., and **W.T.L. Chow**. 2002: "Urban heat island dynamics in Singapore." Fourth Symposium on the Urban Environment, American Meteorological Society, Norfolk, Virginia. Paper presentation

g. Editorial Appointments

- **Co-Editor-in-Chief**, [World Scientific Book Series on Extreme Events](#)
 - Six books currently under contract.
- **Associate Editor** for [Climate Risk Management](#) (Elsevier)
 - 2021 Journal Impact Factor 5.266 (Q1 Journal for Environmental Studies; and Meteorology & Atmospheric Sciences categories).
- **Editorial Board** member for
 - [Landscape and Urban Planning](#) (Elsevier). 2021 Journal Impact Factor 8.119 (Q1 Journal for Urban Studies; Geography; Physical Geography; and Environmental Studies categories).
 - [PLOS Sustainability and Transformation](#) (Public Library of Science) Impact Factor to be determined.
- **Guest Editor** (2019-2021), *Environmental Research Letters (IOPScience)*; 2021 Journal Impact Factor 6.947 (Q1 Journal for Meteorology & Atmospheric Sciences; and Environmental Sciences categories)
 - Special Issue on "[Sustainable Cities: Urban Solutions Toward Desired Outcomes](#)"; 17 articles compiled.

2. Teaching and Mentorship Experience

a. Classes Taught in Singapore Management University

- **COR2203 Climate Change: Global and Local Solutions** (Undergraduate; 45 students) Technology & Society course offered by Office of Core Curriculum. Focus is on solutions that enhance mitigation and adaptation to climate change.
 - Taught for seven terms (Term 1 2019/2020, Term 2 2019/2020, Term 1 2020/2021, Term 2 2020/2021, Term 1 2021/2022, Term 2 2021/2022, Term 1 2022/2023).
- **COR2210 Technological Innovations enhancing Urban Sustainability** (SMU-X Undergraduate, 45 students) Technology & Society course offered by Office of Core Curriculum. Focus is on learning theory and applications of urban sustainability with a local course partner.
 - Taught for three terms (Term 2 2019/2020 – Partnered with Facebook/Meta, Engie, SG Tech and Touch Community Services; Term 2 2021/2022 – Partnered with Singapore Discovery Centre; Term 1 2022/2023 – Partnered with Equinix Singapore)
- **Climate Change Management** (IBF-STC Accredited Course for business professionals, online and in-person). This course is developed together with the Singapore Green Finance Centre (SGFC), with Investment Management Association of Singapore (IMAS) as the training provider.
 - Taught in-person on 12 Jan 2023 (16 participants) and [courses are available online in 5 virtual modules upon registration](#).
- **Sustainability and Climate Change** (Singapore Management University Executive Development Programmes). Instructor for ad-hoc 3-hr courses on sustainability/climate change organised and developed by ExD for programmes targeted at middle-management in the finance and public policy sectors.
 - Taught virtual and in-person in Term 2 2021/2022 and in Term 1 2022/2023 for six sessions.

b. Classes taught in the National University of Singapore

- **GE 1101E/GEK1001: Geographical Journeys: Exploring World Environments** (co-instructor); First year introductory course on geography, compulsory module for geography majors; 200-400 students in size.
 - Taught for five semesters (Semester 1 2014/2015, Semester 1 2015/2016, Semester 1 2016/2017, Semester 1 2017/2018, Semester 1 2018/2019)
- **GE2101: Methods and Practices in Geography** (co-instructor); lower-level introductory undergraduate course on geographical methodology and quantitative methods; 120 students.
 - Taught for one semester (Semester 2 2013/2014)
- **GE 2228: Weather and Climate** (instructor); lower-level introductory undergraduate course on meteorological and climatological concepts; 128 students.
 - Taught for one semester (Semester 1 2013/2014)

- **GE 3216: Applications of GIS and Remote Sensing** (co-instructor); upper-level undergraduate course on geographical information systems and science & remote sensing principles; 30 students.
 - Taught for one semester (Semester 2 2013/2014)
- **GE 3227: Urban Climates** (co-instructor); upper-level undergraduate course on urban meteorology and climatology; 46 students.
 - Taught for one semester (Semester 2 2014/2015)
- **GE 4212: Environmental Modelling** (instructor); Honours-level seminar on human-environmental modelling; 39 students.
 - Taught for one semester (Semester 2 2014/2015)
- **GE 4227: Climate Change: Processes, Impacts and Responses** (instructor); Honours-level seminar on the geographies of climate change that follows the IPCC framework; 40-50 students.
 - Taught for four semesters (Semester 2 2015/2016, Semester 2 2016/2017; Semester 1 2017/2018; Semester 2 2018/2019)
- **GE5211: Dynamic Environments** (co-instructor); graduate-level seminar on coupled human-nature systems; 13 students.
 - Taught for one semester (Semester 2 2018/2019)
- **GE 6216: The Nature of Physical Geography** (co-instructor); graduate-level seminar on the philosophy of physical geography; 6 students.
 - Taught for one semester (Semester 2 2013/2014)

c. Classes taught in Arizona State University

- **GPH 111: Introduction to Physical Geography** (instructor); Lecture-style class introductory course on Earth Systems Science; 180-210 students.
 - Taught for two semesters (Fall 2007, Spring 2010)
- **GPH 111: Introduction to Physical Geography Laboratory** (instructor); Hands-on laboratory class introducing physical geography concepts; 70 students.
 - Taught for two semesters (Spring 2007; Spring 2011)
- **GPH 210: Society and Environment** (instructor); Seminar introducing nature-society-sustainability interface; 10 students.
 - Taught for one semester (Winter 2008)
- **GPH 214: Introduction to Meteorology Laboratory** (instructor); Hands-on laboratory class introducing meteorological concepts; 35 students.
 - Taught for one semester (Fall 2006)
- **GPH 215: Introduction to Climatology Laboratory** (instructor); Hands-on laboratory class introducing climatological concepts; 35 students.
 - Taught for one semester (Spring 2008)
- **GPH 314: Global Change** (instructor); Seminar examining broad interdisciplinary relationships between nature and society, and influence of sustainability; 12 students.
 - Taught for one semester (Winter 2010)

d. Classes assisted in the National University of Singapore

- **GE 1101E: Place, Environment and Society Laboratory** (teaching assistant); Hands-on laboratory class introducing physical geography concepts; 450-500 students.
 - Taught for six semesters (Semester 1&2 2002/2003, Semester 1&2 2003/2004, Semester 1&2 2005/2006)
- **GE 3227: Urban Climates** (teaching assistant); Conducted urban heat island vehicle traverses with students; 10-20 students.
 - Taught for three semesters (Semester 2 2002/2003, Semester 2 2003/2004, Semester 2 2005/2006)
- **GE 3230: Field Studies in Geography: Thailand** (teaching assistant); lectured on physical geography and natural hazards; 30 students.
 - Taught for one semester (Summer 2005/2006)
- **GE 3231: Natural Hazards** (teaching assistant); lectured and tutored on risk perception and natural hazards; 30 students.
 - Taught for one semester (Summer 2005/2006)

e. Mentorship in Singapore Management University

1. **Dr. Yuliya Dzyuban** (Research Fellow for Cooling Singapore 2.0; 2020- to date; mentor)
2. **Dr. Shreya Banerjee** (Research Fellow for Cooling Singapore 2.0; Employed 2021- to date; mentor)
3. **Dr. Peter Crank** (Research Fellow for Cooling Singapore 2.0; Employed 2021-2022; mentor)
4. **Yik Sing Kang** (Research Assistant for Cooling Singapore 2.0; Employed 2020- to date; Mentor)
5. **Graces Ching** (Research Assistant for Cooling Singapore 2.0; Employed 2020-to date; Mentor)
6. **Adrian Tan** (Research Assistant for Cooling Singapore 2.0; Employed 2020-2021; Mentor)
7. **Rachel Pek** (Research Assistant for Cooling Singapore 2.0; Employed 2022-to date; Mentor)
8. **Heng Su Li** (Research Associate for Cooling Singapore 2.0; Employed 2023- to date; Mentor)
9. **Beatrice Ho Hui'En** (Research Assistant for Cooling Singapore 2.0; Employed 2022 – to date; Mentor)
10. **Kango Lee Zhen Xiong** (Individualised Second Major Undergraduate, College of Integrative Studies; Faculty Advisor since 2022/2023 T1)

11. **Pranav Krishna** (Individualised Second Major Undergraduate, College of Integrative Studies; Faculty Advisor since 2022/2023 T1)

f. Mentorship at the National University of Singapore

12. **Dr. Manon Kohler** (Postdoctoral Fellow for Cooling Singapore 1.0 and 1,5 Project; 2017-2019; Mentor)
13. **Dr. C. Joon Chuah** (Postdoctoral Fellow at the Institute of Water Policy, Lee Kuan Yew School of Public Policy; 2016-2018; Mentor)
14. **James Wang Wei** (Ph.D. NUS Geography; Enrolled 2015; co-supervisor & committee co-chair)
15. **Heng Su Li** (Masters NUS Geography; Enrolled 2017; supervisor)
16. **Sharifah Badriyah Binte Syed** (Ph.D. NUS Physiology; Enrolled 2017; committee member)
17. **Hoa T. Tran** (Ph.D. Virginia Tech Geography; Enrolled 2015; committee member)
18. **Dhara Venkata Subrahmanya Sastry** (Ph.D. NUS Geography; Enrolled 2013; co supervisor & committee co-chair)
19. **Aikeen Lim Youu Meng** (2019 Undergraduate Honours Thesis; Environmental Studies, NUS)
20. **Woon Xin Hui** (2019 Undergraduate Honours Thesis; Geography, NUS)
21. **Dr. Alok Bhardwaj** (Ph.D. NUS Geography; 2018; co-supervisor & committee co-chair)
22. **Pearlyn Pang Yuhui** (Masters of Applied GIS; 2017 NUS Geography, co-supervisor)
23. **Yu Minghong** (Ph.D. NUS Geography; Enrolled 2015, downgraded to Masters 2017; was co-supervisor & committee co-chair)
24. **Lee Chung-Rui** (Ph.D. NUS Geography; Enrolled 2014; left program 2016; was co-supervisor & committee co-chair)
25. **Samantha Tan Jia Min** (2018 Undergraduate Honours Thesis; Environmental Studies, NUS)
26. **Kezia Tan Yi Xin** (2018 Undergraduate Honours Thesis; Environmental Studies, NUS)
27. **Beatrice Ho Hui'En** (2017 Undergraduate Honours Thesis; Environmental Studies, NUS)
28. **Rachael Nicole Tan** (2017 Undergraduate Honours Thesis; Environmental Studies, NUS)
29. **Cheryl Wong Hui Min** (2017 Undergraduate Honours Thesis; Environmental Studies, NUS)

30. **Heng Su Li** (2017 Undergraduate Honours Thesis; Geography, NUS)
31. **Judy Goh Jia Chen** (2016 Undergraduate Honours Thesis; Environmental Studies, NUS)
32. **Dawn Ho Xu Qin** (2016 Undergraduate Honours Thesis; Environmental Studies, NUS)
33. **Pearlyn Pang Yuhui** (2016 Undergraduate Honours Thesis; Geography, NUS)
34. **Lee Jinjia** (2016 Undergraduate Honours Thesis; Geography, NUS)
35. **Brendan Cheong De Xiang** (2015 Undergraduate Honours Thesis; Geography, NUS)
36. **Chuah Mei Ying** (2015 Undergraduate Honours Thesis; Geography, NUS)
37. **Siti Nur 'Assyakirin Bte Ali Akbar** (2014 Undergraduate Honours Thesis; Geography, NUS)
38. **Wilson Ng Wei Xiang** (2014 Undergraduate Honours Thesis; Geography, NUS)

g. Graduate student theses examined

39. **Yeo Lik Khian** (Ph.D. 2018 NUS Engineering; Internal Examiner and Oral panel member)
40. **Siow May-Ping, Holly Joy** (M. Env. Mgt. 2018 NUS School of Design and Environment; Internal Examiner)
41. **Li Xin** (Ph.D. 2018 NUS Engineering; Internal Examiner and Oral panel member)
42. **Yan Yingwei** (Ph.D. 2017 NUS Geography; Internal Examiner and Oral panel member)
43. **Suraj Harshan** (Ph.D. 2016 NUS Geography; Internal Examiner and Oral panel member)
44. **Vanessa Lim Hui Min** (M. Soc. Sci. 2014 NUS Geography; Internal Examiner)
45. **Reuben Li Mingguang** (M. Soc. Sci. 2013 NUS Geography; Internal Examiner)

3. Service to academic and public communities

a. Service appointments in Singapore Management University

- **Co-Director**, Deferred Declaration of Degree Programme, College of Integrative Studies (2022-)
 - Co-leading the faculty mentorship of incoming CIS students as well as oversight of the programme.
- **Member**, University Ad-hoc Committee proposing a Masters of Sustainability Programme, College of Integrative Studies and School of Social Sciences (2023-)
 - Developing a proposal for internal and Ministry approval for a graduate program on Sustainability in SMU.
- **Member**, University Search Committee for Computational Social Science strategic hire (2022-)
 - Interviewed and evaluated candidates for a high-level strategic hire on Computational Social Sciences for the University.
- **University Faculty Senate Member**, Singapore Management University (2022-2023)
 - Selected as replacement member of Faculty Senate in 2022; Re-elected in 2023 but declined the role of Senator.
- **Member**, College Committee proposing a Doctoral Programme on Asian Urbanisms, College of Integrative Studies (2021-2022)
 - Developed a successful proposal for internal and Ministry approval for a graduate program on Asian Urbanisms offered in CIS.
- **Member**, University Ad-hoc Committee proposing an Urban Studies Institute, (2020-)
 - Developing a proposal for internal approval for a curated research institute examining urban research across all SMU schools.
- **Academic advisor**, University Ad-hoc Committee on SMU Sustainability reporting (2020-2021)
 - Advised and assisted the Office of Campus Infrastructure and Services (led by VP OCIS) to develop a sustainability vision and reporting from 2021 onwards.
- **Basket Co-ordinator**, Technology and Society, Singapore Management University (2019 –2021)
 - Oversight over the undergraduate programmes of the University Core Curriculum in the Technology and Society Basket of courses.
- **Member**, Undergraduate Curriculum Committee, Singapore Management University (2019 – 2022)
 - Represented the Office of Core Curriculum in the University-level committee with oversight over undergraduate course offerings, and regularly attended monthly meetings during my committee tenure.
- **Member**, Prinsep Street Residences Refresh Task and Finish Group. Convened by SMU Provost (2019-2020)

- Contributed towards the rejuvenation of the Prinsep Street Residences in conjunction with the Office of Core Curriculum/College of Integrative Studies managing the residences.
- **Chair**, Teaching Review and Excellence Committee, Office of Core Curriculum/College of Integrative Studies (2019-)
 - Led a committee to assess the teaching portfolios of colleagues and recommended awards in recognition of annual teaching excellence for CIS and Core Curriculum courses.
- **Academic advisor**, SMU City Dialogues “Inspiring Solutions: Growing Green” 24-25 October 2019
 - Advised the Office of Corporate Communications and Marketing on organising and executing the inaugural City Dialogue, such as speaker selection, programming and developing a White Paper from inputs of the event.
- **Co-organiser**, Brown Bag Organising Committee, School of Social Sciences and Office of Core Curriculum (2019-2020)
 - Organised monthly “Brown bag” seminars of colleagues and assisted with speaker selection and advertising.
- **Chair/member** of Reading Evaluation Committees and School Evaluation Committees for both Promotion & Tenure (Tenure-track hires) and Contract Renewal (Term-track hires) (Six occasions, 2020-)
 - Led (as chair) or assessed (as member) dossiers of colleagues going for promotion or tenure, or for re-contract in the University.
- **Member**, Dean’s Evaluation Committee for research projects (Three occasions, 2019-)
 - Assessed the merits of internal research proposals (MOE Tier 1) for Dean’s consideration.
- **Member**, Interview panel, student admission and scholarship selection for School of Social Sciences (2019-2022) and College of Integrative Studies (2023-)
 - Interviewed (in 2- or 3- hour blocks in Term 2) up to 40 students applying for admission in SOSS or CIS, or about 8-10 potential students applying for scholarships annually.

b. Service appointments in the National University of Singapore

- **Department Webmaster** (2016-2018)
 - Content management and maintenance of Department’s website.
- **Member**, Student and External Relations Committee (2015-2018)
 - Organisation of activities e.g., fieldtrips outings, Geography Challenge/Quiz Bowls, Alumni dialogues etc. that engage and enrich department majors & alumni; management of student internship opportunities; maintenance of department website and social media accounts.
- **Member**, Department Safety Committee (2015-2018)
 - Oversight of risk & safety issues within the department, management of Principal Investigator certification from NUS’s Office of Health Safety and

Environment.

- **Department Co-ordinator**, NUS-University of North Carolina Joint Degree Programme (2015-2018)
 - Assessment and interviews of Faculty of Arts and Social Sciences candidates for the programme.
 - **Member**, Programme Management Committee, Master of Science – Environmental Management (2018-2019)
 - Faculty of Arts and Social Sciences representative; interviews of candidates and assessment of curriculum.
 - **Member**, Undergraduate Studies Committee (2013-2015)
 - Oversight of undergraduate studies, including curriculum planning and design, module development, monitoring of teaching standards, and feedback to students.
 - **Member**, Department Seminar Series Organising Committee (2013-2017)
 - Management and scheduling of visiting speakers for colloquia/seminars on Geography during Semesters 1&2; oversight for physical geography speakers
- c. Consultation experience and commissioned projects (with governmental agencies and industry)**
- **Guest Speaker**, *Strive2Impact*, LGT Private Bank AGT, February 2023
 - Presented and conducted classes on climate change and sustainability [Paid engagement]
 - **Scientific Reviewer**, AECOM (Singapore), “Climate Change Study Report: Development of Soil and Groundwater Local Standards”, 2021-2022
 - Assessed a technical report developed by AECOM for scientific rigour and value [Paid Engagement]
 - **Adjunct Fellow**, Centre for Liveable Cities (Singapore), for Climate Resilience project (Cambridge Road), 2019-2022
 - Consulted with Centre researchers on developing a research project on climate resilience in a local community [Paid engagement]
 - **Guest Speaker**, Singapore Environmental Institute – National Environment Agency (2013, 2016)
 - 3-hr masterclass on Weather and climate for invited visitors and delegates [Paid Engagement]
 - **Guest Speaker**, Temasek Foundation International Water Leadership Programme (2017, 2018, 2022)
 - 1.5 hr masterclass on water resource management for invited executives and civil servants [Paid Engagement]
- d. Service to the Academic Community**
- **Invited Member**, IPCC Workshop on Scenario Development for IPCC climate assessments (Bangkok, Thailand) April 2023

- Expert group tasked with developing the how scenarios drive climate modelling for future IPCC assessments.
- **Invited Member**, IPCC Task Group on Data Support for Climate Change Assessments (TG-Data), 2019-2023
 - Selected member from the IPCC tasked with curating and managing climate data quality used for IPCC assessments
- **Invited Scoping Expert, IPCC**
 - IPCC AR6 Synthesis Report (Singapore, Singapore), October 2019
 - IPCC AR6 Report (Addis Ababa, Ethiopia), May 2017
 - Expert group tasked with developing the chapter outlines for IPCC assessment reports
- **Member, Scientific Advisory Board** advising executive committees on management, oversight and future planning for international research institutes:
 - [RED&BLUE: Real Estate Development & Building in Low Urban Environments](#), Delft University of Technology (2022-)
 - [Melbourne Centre for Cities](#), University of Melbourne (2021-)
- **Expert Reviewer**, Intergovernmental Panel on Climate Change (IPCC), providing feedback for author teams on chapter content.
 - Special Report on 1.5°C Global Warming (2017), First and Second Order Drafts
 - IPCC 5th Assessment Report (2013), Working Group II: Impacts, Adaptation and Vulnerability
- **News Editor**, *Urban Climate News*, Newsletter for the International Association for Urban Climate (From Issue 28–55) (2008-2015)
 - Compiled news articles relevant for urban climate for peer community
- **Peer reviewer for Academic Journals** (pro-bono)

Atmósfera	Journal of Urban Ecology
Atmosphere	Landscape Ecology
Applied Geography	Landscape and Urban Planning
Atmospheric Environment	Nature Climate Change
Building and Environment	Nature Sustainability
Boundary-Layer Meteorology	PLOS One
Bulletin of the American Meteorological Society	PLOS Climate
Climate Research	PLOS Sustainability and Transformation
Climate Risk Management	Progress in Physical Geography
Climatic Change	Proceedings of the National Academy of Sciences
Earth's Future	Quarterly Journal of the Royal Meteorological Society
Environmental Pollution	Science Advances
Environmental Research Letters	Science of the Total Environment
Geophysical Research Letters	Singapore Journal of Tropical Geography
International Journal of Biometeorology	Sustainable Cities and Society
International Journal of Climatology	The Professional Geographer

International Journal of Environmental Research and Public Health	Theoretical and Applied Climatology
International Journal of Population Research	Urban Climate
Journal of Applied Meteorology and Climatology	Urban Ecosystems
Journal of Environmental Management	Urban Forestry & Urban Greening
Journal of Geophysical Research – Atmospheres	Water International

- **Reviewer**, Research grant proposals
 - Social Science Research Thematic Grant, Singapore (2022) [Paid engagement]
 - Czech Science Foundation (2016) [Paid engagement]
 - Social Sciences and Humanities Research Council of Canada (2015) [Paid engagement]
 - National Institute of Education Educational Research Funding Programme, Singapore (2014)
 - Central Arizona-Phoenix Long-Term Ecological Research Graduate Student Research Proposal (2013)
- **Conference session organiser** (**judge for conference presentation awards*)
 - Session on urban climates, 12th Southeast Asian Geography Association's International Conference, Siem Reap, Cambodia, 25-28 Nov 2014
 - Annual meeting of the American Association of Geographers
 - 2013: "Urban Climates" (two sessions) San Francisco, CA*
 - 2007: "Urban Weather and Climates" (three sessions), Los Angeles, CA
 - Central Arizona-Phoenix Long-Term Ecological Research Fifteenth Annual Poster Symposium and All Scientists Meeting, 11 Jan 2013, Scottsdale, Arizona*

e. **Service to Public Community**

- **Invited Member**, Advisory Committee, SG Eco Fund, Ministry of Sustainability and the Environment (Nov 2020 – Nov 2023)
 - [Committee assessing merits of proposals submitted by public to enhance local sustainability initiatives from an SGD 50 Million fund](#). Twice a year meetings.
- **Invited Member**, Environment and Resources Standards Committee, Enterprise Singapore (Aug 2020 –Jul 2023)
 - Committee assessing changes in standards for local environmental and resource use for businesses. Twice yearly meetings and regular monthly assessments of standards and reports.
- **Governmental Delegate** for Singapore, travel to IPCC-46 (Montreal, Canada; 2017), IPCC-48 (Incheon, Seoul; 2018), IPCC-51 (Monaco, Monaco; 2019), and IPCC-54 (Online, 2021), -55 (Online, 2022), and -56 (Online, 2022)
 - Travelled with governmental delegation to provide on-site expertise on climate change for interventions at plenary and meeting side events.
- **Member**, Geography Syllabus Development Committee, Ministry of Education, Singapore

- Syllabus development for GCE 'A' Level H3 Geography students (Member, 2013-2015)
- Syllabus development for GCE 'O' Level upper secondary Geography students (Member, 2018-2019)
- **Invited Guest Lectures** on Climate Change to educational institutes (pro-bono unless specified)
 - St. Patrick's School (2023)
 - National Heritage Board (Founders' Memorial) & Ministry of Education Student Leaders (2022)
 - National Institute of Education (2021)
 - Dunman High School (2021) [Paid Engagement]
 - Geography Teachers Association (2 x 2019)
 - National Junior College (2017, 2018)
 - Fairfield Methodist Secondary School (2016)
 - Changkat Changi Secondary School (2016, 2017)
 - Jurong Junior College (2015)
 - Raffles Institution (2015, 2016, 2018) [Paid Engagement]
 - Ministry of Education Talent Development Programme/International Geography Olympiad Student Selection (2014, 2015, 2016, 2017)
 - Bespoke seminars on climate & climate change for GCE 'A' Level teachers (2014, 2015, 2019, 2020, 2021, 2022)
 - Temasek Junior College (2006, 2008, 2009, 2010, 2013)
 - Victoria Junior College (2006)
- **Invited "Brown Bag" Presenter**
 - School of Social Sciences, Singapore Management University 2020
 - School of Geographical Sciences and Urban Planning, Arizona State University (2006, 2007, 2011)
 - Department of Geography Graduate Student Seminars (2013, 2014, 2015, 2016, 2018)
- Regular News, TV and radio **media appearances** as a Climate expert: [click here for a search engine summary](#)
- **Nominated Judge**, National Weather Study Project, Singapore (2006)
Senoko Power and Ministry of Environment, Republic of Singapore
- **Graduate Student Representative** (2002-2003)
Department of Geography, National University of Singapore