



Curriculum Vitae

TZAI-HUNG WEN

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EDUCATION

Ph.D.	Bioenvironmental Systems Engineering, National Taiwan University	2000-2006
M.S.	Agricultural Engineering, National Taiwan University	1996-1998
B.S.	Agricultural Engineering, National Taiwan University	1992-1996

MAJOR FIELDS

Geographic information science (GISc); Spatial-temporal analysis;

Geographies of diseases; Spatial epidemiology; Urban analytics and environmental sensing

APPOINTMENTS

Professor	2017- present	NTU Department of Geography,
Associate Professor	2013-2017	NTU Department of Geography
Assistant Professor	2009-2013	NTU Department of Geography
Project Assistant Professor	2008-2009	NTU Institute of Epidemiology
Postdoctoral Fellow	2007-2008	Center for Geographic Information Science, RCHSS, Academia Sinica

ACADEMIC DIRECTORSHIP

2021 – present	Director, NTU Spatial Information Research Center
2018 – 2021	Chairperson, NTU Department of Geography
2014 – 2017	Division Director, NTU Global Change Research Center
2010 – 2018	Division Director, NTU Center for Population and Gender Studies

AFFILIATED FACULTY

2021 - present	TIGP in Earth System Science Program (TIGP-ESS)
2021 - present	Center for Teacher Education, NTU Office of Academic Affairs
2013 - present	Master Program in Statistics, National Taiwan University (NTU)
2009 - present	MOHW-NTU Infectious Disease Research and Education Center
2008 - 2009	Department of History, National Chengchi University (NCCU)

AWARDS AND HONORS

2019-2021:	MOST Shackleton Program Grant
2019:	NTU Reward for Excellent Senior Teachers
2018:	MOST Press Conference
2018:	NTU Outstanding Teaching Award
2017:	MOST Futuristic Breakthrough Technology Award
2016-2022	NTU Faculty Merit Pay
2015:	MOST Ta-You Wu Memorial Award
2014-2016:	MOST Excellent Young Investigator Grant
2016, 2013, 2011:	NTU Excellence in Teaching Award

JOURNAL EDITORIAL BOARD

2021	Guest Editor of <i>GeoDigital Life</i>
2020 - present	Editor-in-chief, <i>Journal of Population Studies</i> (TSSCI)
2018 - present	Academic Editor, <i>PLOS ONE</i> (SCI)
2018 - present	Editorial Board (Biostatistics and Methods), <i>BMC Public Health</i> (SCI)
2015 - 2018	Editorial Board, <i>Journal of Geographical Science</i> (TSSCI)
2013 - 2017	Editor-in-chief, <i>Bulletin of the Geographical Society of China</i>
2011 - 2019	Editorial Board/Deputy Editor, <i>Journal of Population Studies</i> (TSSCI)

ACADEMIC OUTREACH

2020 - present	Council Member, Chinese Federation of Surveying & Mapping
2019 - present	Chairman, Chinese Cartographic Association
2019 - present	National Committee (Chinese Taipei) of International Geographical Union
2018 - present	Council Member, Taiwan Geographic Information Society (TGIS)
2018 – 2020	Open Government Data Consultation Committee, Taiwan EPA
2018 - 2019	MOST Grant Review Committee on Regional Science & Geography
2018 - 2020	MOST Grant Review Committee on Geospatial Information Technology
2017 – 2019	Secretary-General, Chinese Cartographic Association
2017 - present	Executive Council Member/Supervisor, Population Association of Taiwan
2017 - present	Council Member (as Chairman since 2019/08), Geographical Society
2016 - present	National Mosquito-Borne Diseases Control Research Center
2012 - present	Editorial Board for High-School Geography Textbooks

2016-2021 Refereed Publications**(* corresponding author)**

1. Kuo FY, **Wen TH *** (2021), Regionalization for Infection Control: An Algorithm for Delineating Containment Zones Considering the Regularity of Human Mobility, *Applied Geography* 126:102375
2. Chan CH, **Wen TH *** (2021), Revisiting the Effects of High-Speed Railway Transfers in the Early COVID-19 Cross-Province Transmission in Mainland China, *Int. J. Environ. Res. Public Health* 18(12):6394.
3. Chan CH, Chu TH, Wu JH P, **Wen TH *** (2021), Spatially Characterizing Major Airline Alliances: A Network Analysis, *ISPRS International Journal of Geo-Information* 10(1):37.
4. Jiang JA, Wang JC, Hsieh CL, Tseng KS, Ye ZW, Su LK, Sun CH, **Wen TH**, Juang JY (2021), An Alternative Body Temperature Measurement Solution: Combination of a Highly Accurate Monitoring System and a Visualized Public Health Cloud Platform, *IEEE Internet of Things Journal* 8(7):5778-5793
5. **Wen TH ***, Liao HY, Yang KL, Chen TH (2021), Characterizing After-Rain Standing Waters in Urban Built Environments through a Multilevel Image Analysis, X. Yang (eds.), *Urban Remote Sensing: Monitoring, Synthesis, and Modeling in the Urban Environment*, Wiley-Blackwell.
6. Kuo FY, **Wen TH *** (2021), A Mathematical Model for Evaluating the Medical Resource Availability of COVID-19 in Time and Space, S. Shaw and D. Sui (eds.), Mapping COVID-19 in *Space and Time: Understanding the Spatial and Temporal Dynamics of a Global Pandemic*, Springer.
7. Liao HY, **Wen TH *** (2020), Extracting Urban Water Bodies from High-resolution Radar Images: Measuring the Urban Surface Morphology to Control for Radar's Double-bounce Effect, *International Journal of Applied Earth Observations and Geoinformation* 85:102003.
8. Hossain MP, Junus A, Zhu X, Jia P, **Wen TH**, Pfeiffer D, Yuan HY (2020), The Effects of Border Control and Quarantine Measures on the Spread of COVID-19, *Epidemics* 32: 100397.
9. Chiang YL, Wang JC, Sun CH, **Wen TH**, Juang JY, Jiang JA (2020), Mobile Measurement of Particulate Matter Concentrations on Urban Streets: System Development and Field Verification, *IEEE Access* 8:197617–197629
10. Cheng YC, Lee FJ, Hsu YT, Slud EV, Hsiung CA, Chen CH, Liao CL, **Wen TH**, Chang CW, Chang JH, Wu HY, Chang TP, Lin PS, Ho HP, Hung WF, Chou JD, Tsou HH (2020), Real-Time Dengue Forecast for Outbreak Alerts in Southern Taiwan, *PLOS Neglected Tropical Diseases* 14(7): e0008434.

11. Ng TC, **Wen TH** * (2019), Spatially Adjusted Time-varying Reproductive Numbers: Understanding the Geographical Expansion of Urban Dengue Outbreaks, *Scientific Reports* 9: 19172.
12. Ng IC, **Wen TH** *, Yang ST, Fang CT *, Hsueh PR (2019), Detecting Tuberculosis Clusters in Urban Neighborhoods, Taipei, Taiwan: Linking Geographic and Genotyping Evidence, *Applied Geography* 104: 56-64.
13. Yuan HY, **Wen TH**, Kung YH, Tsou HH, Chen CH, Chen LW, Lin PS (2019), Prediction of Annual Dengue Incidence by Hydro-Climatic Extremes for Southern Taiwan, *International Journal of Biometeorology* 63(2): 259-268.
14. **Wen TH** (2019), Spatial Assimilation, In Anthony M. Orum (Eds.), *Wiley-Blackwell Encyclopedia of Urban and Regional Studies*, Wiley-Blackwell.
15. Chen TH, Chen YJ, **Wen TH** * (2018), Revisiting the Role of Rainfall Variability and its Interactive Effects with the Built Environment in Urban Dengue Outbreaks, *Applied Geography* 101(12):14-22.
16. **Wen TH** *, Hsu CS, Hu MC (2018), Evaluating Neighborhood Structures for Modeling Intercity Diffusion of Large-scale Dengue Epidemics, *International Journal of Health Geographics* 17:9.
17. Kuo FY, **Wen TH** *, Sabel C (2018), Characterizing Diffusion Dynamics of Disease Clustering: A Modified Space-Time DBSCAN (MST-DBSCAN) Algorithm, *Annals of the American Association of Geographers* 108(4):1168-1186.
18. Ko HY, Li YT, Chao DY, Chang YC, Li ZR, Wang M, Kao CL, **Wen TH**, Shu PY, Chang GJ, King CC (2018), Inter- and Intra-Host Sequence Diversity Reveal the Emergence of Viral Variants during an Overwintering Epidemic Caused by Dengue Virus Serotype 2 in Southern Taiwan, *PLOS Neglected Tropical Diseases* 12(10): e0006827.
19. **Wen TH**, Hsu CS, Sun CH, Jiang JA, Juang JY (2018), A Location-based Client-Server Framework for Assessing Personal Exposure to the Risk of Respiratory Disease Transmission, In Shaw SL and Sui D (Eds.). *Human Dynamics Research in Smart and Connected Communities*, Springer
20. Chin WC, **Wen TH** *, Sabel C, Wang IH (2017), A Geo-Computational Algorithm for Exploring the Structure of Diffusion Progression in Time and Space, *Scientific Reports* 7:12565.
21. **Wen TH** *, Chin WC, Lai PC (2017), Understanding the Topological Characteristics and Flow Complexity of Urban Traffic Congestion, *PHYSICA A: Statistical Mechanics and Its Applications* 473:166-177.
22. Lan YC, **Wen TH**, Chang CC, Liu HF, Lee PF, Huang CY, Chomel BB, Chen YM (2017), Indigenous Wildlife Rabies in Taiwan: Ferret Badgers, a Long-term Terrestrial Reservoir, *BioMed Research International*, Vol. 2017, Article ID 5491640.

23. Chen TH, **Wen TH ***, Fang CT, Chan PC (2017), Assessing Infection Risk of Tuberculosis (TB) Contacts in Different Case-contact Contexts, *Taiwan Journal of Public Health* 36(2): 107-121
24. **Wen TH**, Chin CB, Lai PC (2017), Link Structure Analysis of Urban Street Networks for Delineating Traffic Impact Areas. In Essaïdi and Nemiche (Eds.). *Advances in Complex Societal, Environmental and Engineered Systems*, Springer.
25. **Wen TH ***, Tsai CT, Chin CB (2016), Evaluating the Role of Disease Importation in the Spatiotemporal Transmission of Indigenous Dengue Outbreak, *Applied Geography* 76: 137-146.
26. **Wen TH**, Lin MH, Li MH (2016), Potential Effects of Climate Changes on Dengue Transmission: A Review of Empirical Evidence from Taiwan, In Rais Akhtar (Eds.). *Climate Change and Human Health Scenario in South and Southeast Asia*, Springer Series: Advances in Asian Human-Environmental Research, Springer.
27. Lin CH, **Wen TH ***, Teng HJ, Chang NT (2016), The Spatiotemporal Characteristics of Potential Dengue Risk Assessed by *Aedes aegypti* and *Aedes albopictus* in High Epidemic Areas, *Stochastic Environmental Research and Risk Assessment*, 30(8): 2057–2066.
28. Tsai KH, Chang SF, Yen TY, Shih WL, Chen WJ, Wang HC, Yu XJ, **Wen TH**, Wu WJ, Shu PY. (2016), Prevalence of Antibodies against *Ehrlichia spp.* and *Orientia tsutsugamushi* in Small Mammals around Harbors in Taiwan. *Parasites & Vectors* 9:25.
29. Lin MH, Kuo RN, Chin CB, **Wen TH *** (2016), Profiling the Patient Flow for Seeking Healthcare in Taiwan: using Gravity Modeling to Investigate the Influences of Travel Distance and Healthcare Resources, *Taiwan Journal of Public Health* 35(2): 136-151.