Boen Zhang
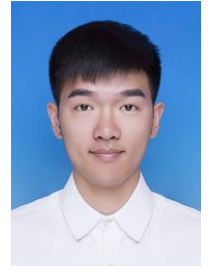
Department of Land Surveying and Geo-Informatics
The Hong Kong Polytechnic University
Google Scholar: https://scholar.google.com.hk/citations?user=dJlpfloAAAAJ&hl=en
ResearchGate: https://www.researchgate.net/profile/Boen_Zhang
E-mail address: boorn.zhang@connect.polyu.hk

EDUCATION

2011 – 2015	B.S., Wuhan University, China
2015 – 2018	M.S., Wuhan University, China
2018 – present	Ph.D. Candidate, The Hong Kong Polytechnic University, Hong Kong, China

PUBLICATIONS

- **Zhang, B.**, Wang, S., Qing, Y., Zhu, J., Wang, D., & Liu, J. (2022). A vine copula-based polynomial chaos framework for improving multi-model hydroclimatic projections at a multi-decadal convection-permitting scale. Water Resources Research, 58, e2022WR031954

- **Zhang, B.**, Wang, S. & Zhu, J. (2022). A weighted ensemble of regional climate projections for exploring the spatiotemporal evolution of multidimensional drought risks in a changing climate. Climate Dynamics, 58, 49–68

- **Zhang, B.**, & Wang, S. (2021). Probabilistic characterization of extreme storm surges induced by tropical cyclones. Journal of Geophysical Research: Atmospheres, 126, e2020JD033557

- **Zhang, B.**, Wang, S., & Wang, Y. (2021). Probabilistic projections of multidimensional flood risks at a convection-permitting scale. Water Resources Research, 57, e2020WR028582

- **Zhang, B.,** Wang, S., & Wang, Y. (2019). Copula-based convection-permitting projections of future changes in multivariate drought characteristics. Journal of Geophysical Research: Atmospheres, 124, 7460–7483

- **Zhang, B.,** Xu, G., Jiao, L., Liu, J., Dong, T., Li, Z., Liu, X., & Liu, Y. (2019). The scale effects of the spatial autocorrelation measurement: Aggregation level and spatial resolution. International Journal of Geographical Information Science. 33, 945–966

- **Zhang, B.**, Jiao, L., Xu, G., Zhao, S., Tang, X., Zhou, Y., & Gong, C. (2018). Influences of wind and precipitation on different-sized particulate matter concentrations ($PM_{2.5}$, PM_{10}, $PM_{2.5–10}$). Meteorology and Atmospheric Physics, 130, 383–392

- Shen, Y., Wang, S., **Zhang, B.**, & Zhu, J. (2022). Development of a stochastic hydrological modeling system for improving ensemble streamflow prediction. Journal of Hydrology, 608, 127683

- Liu, J., Jiao, L., **Zhang, B.**, Xu, G., Yang, L., Dong, T., ... & Zhou, Z. (2021). New indices to capture the evolution characteristics of urban expansion structure and form. Ecological Indicators, 122, 107302

- Qing, Y., Wang, S., **Zhang, B.**, & Wang, Y. (2020). Ultra-high resolution regional climate projections for assessing changes in hydrological extremes and underlying uncertainties. Climate Dynamics, 55, 2031–2051

- Chen, H., Wang, S., Zhu, J, & **Zhang, B.** (2020). Projected changes in abrupt shifts between dry and wet extremes over China through an ensemble of regional climate model simulations. Journal of Geophysical Research: Atmospheres, 125, e2020JD033894

- Li, Z., Jiao, L., **Zhang, B.**, Xu, G., Liu, J., (2021). Understanding the pattern and mechanism of spatial concentration of urban land use, population and economic activities: a case study in Wuhan, China. Geospatial Information Science, 24, 678–694

- Xu, G., Jiao, L., **Zhang, B.**, Zhao, S., Yuan, M., Gu, Y., ... & Tang, X. (2017). Spatial and temporal variability of the $PM_{2.5}/PM_{10}$ ratio in Wuhan, Central China. Aerosol and Air Quality Research, 17, 741–751

- Xia, C., Zhang, A., Wang, H., **Zhang, B.**, & Zhang, Y. (2019). Bidirectional urban flows in rapidly urbanizing metropolitan areas and their macro and micro impacts on urban growth: A case study of the Yangtze River middle reaches megalopolis, China. Land Use Policy, 82, 158–168

- Li, Z., Wang, J., Kong, X., **Zhang, B.**, Liu, J., Ding, S., & Du, Y. (2021). Effects of ecosystems preservation on economic growth in China's coastal region: Multilevel modelling and exploration. Ecological Indicators, 132, 108224

- Zhu, J., Wang, S., Wang, D., Zeng, X., Cai, Y., & **Zhang, B.** (2021). Upholding labor productivity with intensified heat stress: Robust planning for adaptation to climate change under uncertainty. Journal of Cleaner Production, 322, 129083

- Jiao, L., Liu, J., Xu, G., Dong, T., Gu, Y., **Zhang, B.**, Liu, Y. and Liu, X. (2018). Proximity Expansion Index: An improved approach to characterize evolution process of urban expansion. Computers, Environment and Urban Systems, 70, 102–112

- Jiao, L., Xu, G., Jin, J., Dong, T., Liu, J., Wu, Y., & **Zhang, B.** (2017). Remotely sensed urban environmental indices and their economic implications. Habitat International, 67, 22–32

- Jiao, L., Xu, G., Xiao, F., Liu, Y., & **Zhang, B.** (2017). Analyzing the impacts of urban expansion on green fragmentation using constraint gradient analysis. The Professional Geographer, 69, 553–566

- Xu, G., Jiao, L., Yuan, M., Dong, T., **Zhang, B.**, & Du, C. (2019). How does urban population density decline over time? An exponential model for Chinese cities with international comparisons. Landscape and Urban Planning, 183, 59–67

AWARDS & HONORS

Second-class Academic Scholarship of Wuhan University	2016
Excellent Graduate Student of Wuhan University	2016
First-class Academic Scholarship of Wuhan University	2017
The National Scholarship of Postgraduates of Wuhan University	2017