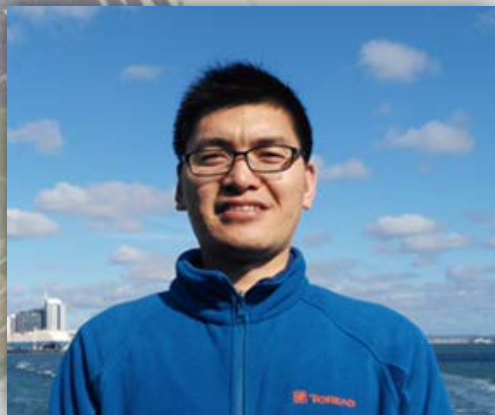


A Remote-Sensing Method of Selecting Reference Stations for Evaluating Urbanization Effects on Climate and Its Application in China



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Since the 1990s, rapid urbanization has led to the deployment of many new meteorological stations in China metropolitan regions, and associated with it frequent relocation and discontinuation of observational records at many preexisting stations. This phenomenon is sometimes referred to as the “city-entering” of stations. To study the impacts of urbanization on meteorological observation series, we developed a remote-sensing method of selecting reference stations based on Landsat-derived maps of land use, land cover and thermal environment. We applied the method to evaluate the impacts of urbanization on the time series of surface air temperature, temperature extremes, wind, and haze days. This work provides convincing evidence that 1) urban expansion has significant impacts on the evaluation of regional climate change; 2) high-resolution images of Landsat are useful for selecting reference climate stations to evaluate the potential urban biases in meteorological observations in certain regions; and 3) meteorological observation adjustments of relocation-induced inhomogeneities are essential for the study of regional climate change.

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**Conference Room, 3/F,
Mong Man Wai Building**



*This Seminar will be conducted in English
(supplemented with Mandarin Chinese)*



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