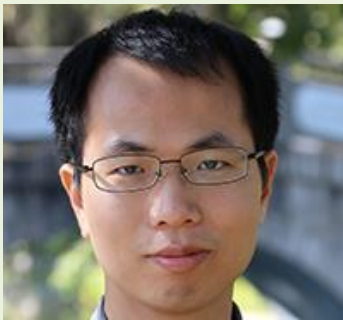


THE CHINESE UNIVERSITY OF HONG KONG
DEPARTMENT OF GEOGRAPHY AND RESOURCE MANAGEMENT
SEMINAR



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Flood Risks Associated with Heavy Precipitation from Tropical Cyclones

ABSTRACT

Tropical cyclones (TCs) may bring about heavy precipitation with high intensity or large total amount, resulting in flood events in coastal regions. The motion of TCs is an important factor that affects the rainfall total in a specific region. TCs with lower motion speed and longer passage time may cause greater local rainfall total and lead to devastating impacts. For example, Hurricane Harvey in 2017 lingered over Texas for a few days, leading to a 2,000-year rainfall total and unprecedented floods. Based on observations and Global Climate Models, this study found a significant slowdown of TCs over the coast of China during 1961-2017. The long-term observations showed significant inverse relationships between TC moving speeds and local rainfall totals. Our analysis of the probability distribution functions indicated that slow-moving TCs is more likely to generate heavy rainfall of higher total amounts than fast-moving ones. These results suggested that the flood risks associated with heavy rainfall of TCs tend to increase because of the slowdown of TCs.

LANGUAGE

English

DATE

4 Feb 2021 (Thu)

TIME

4:30 – 6:00 pm (GMT+8)

ZOOM MEETING

ID: 973 6037 5790

<https://cuhk.zoom.us/j/97360375790>

(no password required)

ABOUT THE SPEAKER

Dr. Jianfeng Li is an Associate Professor in the Department of Geography and Director of the Centre for Geo-computation Studies of Hong Kong Baptist University. His major research interests include hydroclimatology, environmental change, and water hazards, focusing on climate change impacts on hydrological processes and the environment, especially hydrological and climatic extremes. He is an associate editor of *Hydrological Processes*, an international journal in hydrology, and has been active in serving in various professional communities. His studies have been published in top-tier journals, including *Nature Climate Change*, *PNAS*, *Journal of Hydrometeorology*, and *Journal of Geophysical Research: Atmospheres*.

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