

DIAGNOSIS AND HINDCAST OF NATURAL HAZARDS IN SOUTHEAST ASIA

Speaker

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Abstract

SEA is the world's largest archipelago surrounded by the world's warmest oceans. The strong atmospheric instability and abundant moisture supply make Southeast Asia (SEA) the most prolific basin for floodings, which accounts for 30% of the global total. The 2021 flood in the Malay Peninsula was deemed a 'once-in-a-century' event, causing 51 deaths and economic losses of USD\$1.5 billion. Meanwhile, in the context of global warming and the associated complexity in climate variability, SEA is emerging as a new hotspot of heatwaves. Marked as the region's 'once-in-200-year' event, the 2023 SEA heatwave set the region's highest temperature record of 49°C. These catastrophes have attracted worldwide attention because of the unprecedented severity and widespread socioeconomic impacts. By diagnosing and hindcasting the region's devastating natural hazards, the most comprehensive SEA Natural Hazard Reanalysis dataset (SEA-NHRA) is under construction.

Biography

Dr. Wang Jingyu is an Assistant Professor in the Humanities & Social Studies Education Academic Group, National Institute of Education (NIE), Nanyang Technological University (NTU). Before joining NIE/NTU, he worked as a research associate at the Department of Atmospheric Sciences & Global Change, Pacific Northwest National Laboratory (PNNL), observing and simulating mesoscale convective systems and the related natural hazards of tornado and hail. Jingyu received his Ph.D. degree in Atmospheric Sciences (with a minor degree in Hydrology) from the University of Arizona, with the focus of in-situ observation of cloud microphysics using research aircraft.



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