



Understanding and Estimating River Flood Hazards across Timescales: from Flood Events to Long-Term Dynamics

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Flood-related economic losses have increased dramatically over the past decades in most parts of the world, and are expected to increase in the future due to climate dynamics and increasing exposure. From a practical perspective, it is of interest to estimate the probability of large flood events to happen at a certain location or region (i.e. flood hazard estimation). From a theoretical perspective, it is of interest to understand how the flood hazard depends on the causal mechanisms and dominant processes in the atmosphere, catchment, and river system. The talk will link these practical and theoretical perspectives arguing that understanding flood processes at different temporal scales, from events to centuries, is valuable for estimating the river flood hazard reliably, especially if one expects the landscape and/or climate to change in the future.