



The DFG Research Training Group on Urban Water Interfaces (UWI) invites to a  
guest lecture by

**Dr. Xilin Xia**

**School of Architecture, Building and Civil Engineering**

**Loughborough University**

**Thursday, 28<sup>th</sup> January 2021, 4:15 - 5:15 pm**

**via Zoom**

**Lecture title: *High-Performance Computing for Multi-hazard Risk Assessment and Real-time Forecasting***

*Abstract*

Due to Climate Change, there will be more extreme weather events such as intense rainfall storms in the future. These events often cause hydrological hazards such as flooding, landslides and debris flows. These hazards rarely happen alone. Instead, they usually happen simultaneously or sequentially in chains in the same event. The impacts of multi-hazard events are usually much larger than the combined risk of individual hazards. Therefore, modelling and estimating the impacts of these multi-hazard events is essential for managing the hazard risk. In this talk, I will present my recent research on developing high-performance modelling technologies for multi-hazard events, including both hydrodynamic and machine learning based approaches, and their applications in risk assessment and real-time forecasting.

*About the speaker*

Dr Xia is currently a Lecturer in Water Engineering in the School of Architecture, Building and Civil Engineering at Loughborough University. Before joining Loughborough in May 2018, he was a Research Associate at Newcastle University. He received his PhD from Newcastle University in 2017. He is working as investigators on several projects under the NERC 'Towards Sustainable Earth (TaSE)', 'UK Climate Resilience' and the UK Met Office 'Weather and Climate Science for Service Partnership' programmes, with a total value of over £400K. He has published 21 papers in leading international journals and have won two "best paper" awards at international conferences. His research interests cover computational hydraulics and its applications in modelling and understanding hydrological and geomorphological processes in catchments.

Personal website: <https://www.lboro.ac.uk/departments/abce/staff/xilin-xia/>

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