

Research project and supervisory team

Supervisory Team	Dr Meili Feng (School of Geographical Sciences, Climate and Environmental Solutions Research Center) Dr Huan Jin (School of Computer Science, Faculty of Science and Engineering) Dr Fangfang Zhu (Department of Civil Engineering, Climate and Environmental Solutions Research Center)
Short introduction & description of research project	We invite applications for a PhD scholarship focused on the AI-driven intelligent water systems by integrating advanced artificial intelligence with hydrological and coastal environmental sciences. This PhD project aims to develop AI-driven frameworks for advancing water system understanding, prediction, and management from inland river basins to coastal environments. It addresses key challenges including hydrological uncertainty, complex water–environment interactions, heterogeneous data integration, and the limitations of conventional data-driven models. The research will develop physics-informed, causality-aware, and multimodal AI approaches to improve the reliability, interpretability, and adaptability of hydrological predictions by integrating diverse data sources such as satellite observations, sensor networks, and simulation models. By combining AI, hydrology, and environmental modelling, this project will support smarter decision-making for flood forecasting, water quality assessment, coastal monitoring, and sustainable water resource management. Candidates with strong academic backgrounds and research experience in interdisciplinary studies in environmental science, AI and big data are encouraged to apply. Applicants who demonstrate proficiency in research and publications are strongly preferred or prioritized. Good communication and independent research skills are also highly desirable.
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