

# AI FOR EARTH OBSERVATION

## Speaker

## Prof. Xiaoxiang Zhu

Technical University of Munich, Germany



## Abstract

Geoinformation derived from Earth observation (EO) satellite data is indispensable for tackling grand societal challenges, such as urbanization, climate change, and the United Nations Sustainable Development Goals (SDGs). Furthermore, Earth observation has irreversibly arrived in the Big Data era, e.g. with ESA's Sentinel satellites and with the blooming of NewSpace companies. This brings both tremendous opportunities and unprecedented analytical challenges. This talk showcases how innovative AI methods and big data analytics solutions can significantly improve the retrieval of large-scale geo-information from Earth observation data, and consequently lead to breakthroughs in geoscientific and environmental research. It also discusses emerging frontiers where AI, EO, and sustainability converge to support actionable insights for a more resilient planet.

## Biography

Xiaoxiang Zhu is Chair Professor for Data Science in Earth Observation at the Technical University of Munich, Germany. She directs the national center of excellence ML4Earth, the international AI future lab AI4EO, and the Munich Data Science Institute. Her research focuses on artificial intelligence and data science in Earth observation. She develops innovative signal processing and machine learning methods, and big data analytics solutions to extract highly accurate large-scale geo-information from big EO data. Her team aims at tackling societal grand challenges, e.g. Global Urbanization, Climate Change, and UN's SDGs, thus, works on solutions that can scale up for global impact.



**21 May 2026**  
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**Room 5583 (Lift 27/28),  
Academic Building,  
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## Enquiry:

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