

# Monitoring Groundwater Using Anthropogenic Seismic Noise



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**11:30 a.m.**



**Conference Room, 3/F,  
Mong Man Wai Building**



**[Zoom Link](#) (Mixed-mode)**

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Groundwater is not only the most important freshwater resource but also plays a pivotal role in climate modeling through its interaction with atmospheric water content. As global population and industrial activity increase, groundwater aquifers are becoming natural infrastructures that undergo rapid changes due to human impacts, calling for high-resolution groundwater monitoring. In this seminar, I will present two case studies where anthropogenic seismic noises from different sources are utilized to monitor the groundwater. These studies extract seismic attenuation information using different signal processing techniques, yielding detailed information about both shallow (1-3 m) groundwater and deep (50-100 m) aquifers. By testing and applying these studies across a broader range of environmental conditions, we aim to piece together a more comprehensive history of global groundwater over recent decades, leveraging globally recorded seismic data.



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