



**Post-doc/Ph.D position in the Department of Earth Sciences at the University of Hong Kong (July 2023)**

**Development of a 3D Coupled Groundwater-Seawater Model for Simulating Reactive Transport of Chemicals in Aquifers and Oceans**

Coastal aquifers are significant contributors of various chemicals to the ocean. Numerical models exist that analyze the transport and migration of chemicals in aquifers due to mixing and diffusion. Similarly, there are models that study the movements and transportation of chemicals in the ocean by taking into account seawater dynamics, currents, waves, and tides. However, there are almost no models that treat groundwater and seawater as a continuum and couple the physical processes of groundwater and seawater, describing the chemical migrations and exchange between both types of water.

The hydrogeology group in the department of Earth Sciences at the University of Hong Kong is seeking a motivated Ph.D. student or post-doctoral candidate to develop a comprehensive groundwater-seawater model that simulates the reactive transport of chemicals, including their release from the aquifer, adsorption, and migration and mixing in the ocean. The ideal candidate must possess a solid track record and extensive experience in either groundwater flow or ocean physical modelling and must be open to learning about modelling in the other field.

For further details, please contact Prof. Jimmy Jiao at [jjiao@hku.hk](mailto:jjiao@hku.hk).