

## Hong Kong Branch Distinguished Seminar Series



### ***This is not planet Earth: New tools to study the deep sea, and what we've learned about this ocean world***

**Prof. Peter Girguis, Harvard University**

#### Abstract

The very first “ocean world life detection” mission took place on board the HMS Challenger in 1872, when scientists and crew sailed for four years and produced the first comprehensive survey of Earth's ocean - from sea surface to sea floor. Today, ocean scientists explore the ocean through a combination of human-operated and autonomous instruments. Space scientists are also rapidly developing technologies required for missions to other worlds, including ocean worlds. We suggest that fostering a rich and extensive collaboration among ocean and space scientists is critical if we are to advance our understanding of Earth's ocean as well as other ocean worlds such as Enceladus and Europa.

Our laboratory focuses on better understanding how matter/energy flow between the biosphere and the geosphere, and how living things in the deep sea thrive in their respective environments. To that end, we develop technologies that help further our understand of these relationships. We are also committed to democratizing science by developing sensors and samplers that are accessible to the broader community. Here I will present some of the latest technological developments -as well as the lessons- from exploring our own inner space. We will also present highlights of our recent efforts that examine the relationships among abiotic and biological processes in our ocean.



20 May 2021 (Thursday)  
9 am - 10 am (GMT +8, HK Time)  
<https://hkust.zoom.us/j/2074605139>

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