



The University of Hong Kong
School of Biological Sciences

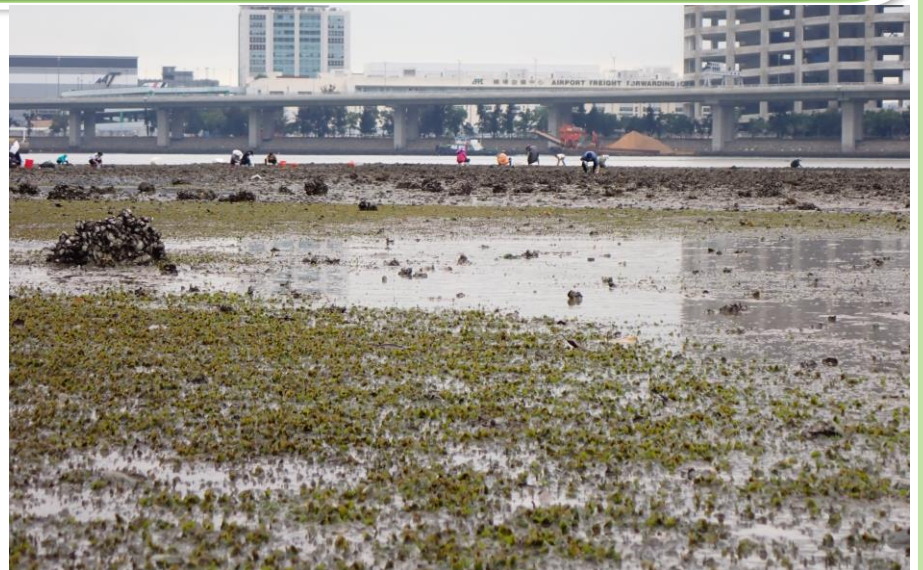
Qualifying
Seminar

Ecological and adaptive physiological responses of seagrasses to heavy metal pollution in highly urbanized areas

Date: 15th June 2022

Time: 16:00

Venue: 3N01 & Zoom



About the speaker:

Ho-Tun NG is a MPhil student from Dr. GAITÁN-ESPITIA, Juan Diego's lab. Her research focuses on assessing the influence of heavy metal pollution on local seagrass.



Abstract:

Heavy metal pollution is a major threat to Hong Kong's marine biodiversity and coastal ecosystem services. For seagrasses, important marine primary producers, the increased human-influenced input of pollutants such as mercury (Hg), cadmium (Cd), arsenic (As), chromium (Cr), thallium (Tl), and lead (Pb), has detrimental physiological and demographic effects. These negative impacts of heavy metals may explain the rapid decline of seagrass populations in Hong Kong in recent years. In my MPhil, I will assess the extent to which heavy metals are influencing ecological patterns of seagrasses in Hong Kong. Considering the long-term exposure of local seagrass populations to heavy metal pollution, I will assess their physiological plasticity and molecular regulation, aiming to understand the overall resilience and adaptive potential. Moreover, as seagrasses are not single entities but are shaped by ecological interactions with associated microbial communities, my study will assess the role of these communities regulating the ecological patterns of seagrasses along gradients of heavy metal pollution in Hong Kong. Through this integrative approach I am to develop better understanding for planning seagrass conservation and restoration efforts in Hong Kong.