The University of Hong Kong
School of Biological Sciences

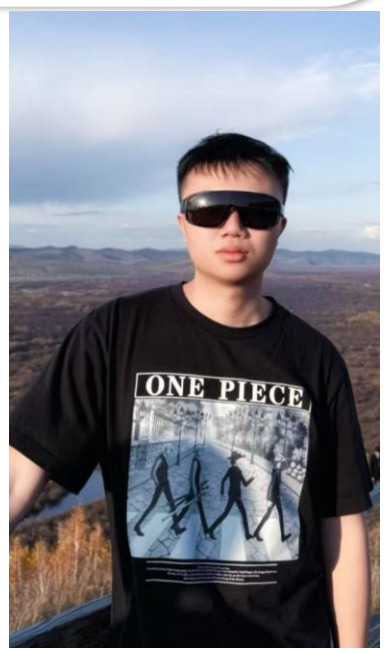
Qualifying Seminar

Regulation Mechanisms of Fish Collective Behaviour

Date: 10th March, 2026

Time: 10:30 am

Venue: 6N-11



About the speaker:

Yongjun MA is a PhD candidate under the supervision of Prof. Celia Schunter. His research focuses on understanding the regulation mechanisms of fish collective behaviour.

Abstract:

Collective behaviour in fish, such as schooling and shoaling, depends on complex brain responses to external cues. While these behaviours are ecologically important, current knowledge of the underlying mechanisms remains limited.

My study aims to investigate how the brain processes external cues during collective behaviour from two perspectives:

- Transcriptome (Gene Regulation): Identify which genes and pathways in the brain respond to external stimuli during collective behaviour.
- Neural Circuit Regulation: Determine which brain regions are activated and involved in processing external cues.

By integrating molecular and circuit-level analyses, this research will provide new insights into the neural regulation of collective behaviour in fish, advancing our understanding of how sensory inputs are transformed into coordinated group dynamics.