

# 260<sup>th</sup> WPI-IIIS Seminar

## ~Mini Symposium~ Student Seminar

### When the brain goes cold

During winter, Djungarian hamsters enter daily torpor, a profound and reversible metabolic shutdown during which body temperature drops substantially and brain activity falls almost silent. Yet these animals wake, move, and remember. How does the brain protect and restore itself through such extreme physiological challenge, and what role does sleep play in recovery? Combining electron microscopy, protein biochemistry, cortical electrophysiology, and behaviour, I trace how torpor reshapes synaptic structure, molecular machinery, and network dynamics. The findings suggest that the brain actively remodels during torpor to preserve function across the torpor-euthermia cycle.



**Ms. Xiao Zhou**

University of Oxford

Date: **Tuesday, August 4, 2026**

Time: **18:00 – 18:30**

Venue: **1F Auditorium, IIIS Building**

**\* On-site participation only**



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