Andy Hammerlindl (University of Sydney)

Title: Anaylsing slow-fast systems using spectral properties

Abstract:

Multiscale or "slow-fast" dynamical systems exhibit different behaviours at different time scales.

This talk will show how numerical techniques involving the Perron-Frobenius and Koopman operators and their spectra can be used to test for the presence of slow-fast behaviour and to analyse both the slow and fast dynamics in isolation.