

Invited Talk Abstract

ICOML 2026 | July 27–29, 2026

Robustness against Noise**LieJune Shiau***Department of Mathematics, University of Houston, Clear Lake*

Date	July 28, 2026
Time	11:00–11:30
Session	Session 4
Venue	S102, Lecture Hall, Gong-Guan Campus, NTNU

Abstract

Noise, fluctuations, and variability in biological systems are often viewed as undesirable or even detrimental, as excessive noise can contribute to disease and dysfunction. Nevertheless, noise is ubiquitous and arises inevitably from both intrinsic and extrinsic sources. How, then, does the body cope with such pervasive variability? In this work, we demonstrate that, under certain conditions, biological noise can in fact play a beneficial role in supporting a variety of fundamental physiological functions.