



Speaker Bio



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About the speaker:

I am interested in quantitative and theoretical approaches to studying principles in cellular system. I received bachelor degree double-majoring in Life Science and Physics at National Taiwan University. Then, I pursued my PhD training in Edo Kussell lab at New York University, studying evolutionary dynamics, stochastic physics in biology, and microfluidic experiments. After my PhD, I worked as a postdoc researcher at Yale and Stanford University in Christine Jacobs-Wagner lab, working on systems biology and single-cell metabolism. I came back to Taiwan in 2023 as an assistant research fellow at Institute of Molecular Biology, Academia Sinica.

I am interested in understanding the physical principles of growing systems, such as cells and microbiomes. My research focused on long-term behavior in nonlinear reaction networks and developed a mathematical framework for exponential-growing systems. I am also studying the transport phenomena on reaction networks, which served as the foundation of cell systems.

In addition to theoretical studies, I am also working with microfluidic cell culture, time-lapse microscopy, and quantitative image analysis. During my PhD and postdoc, I studied single-cell response to fluctuating antibiotic administration and characterized the temporal dynamics of ATP during cell growth.

