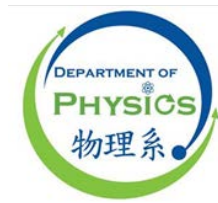




香港浸會大學  
HONG KONG BAPTIST UNIVERSITY  
FACULTY OF SCIENCE



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# Department of Physics & Institute of Computational and Theoretical Studies

## *JOINT COLLOQUIUM*

# Systems Biology of Cellular Aging

**Professor Hao Li**

University of California San Francisco

November 29, 2018 (Thursday)

4:30pm – 5:30pm

RRS905, Sir RR Shaw Building, HSH Campus

### **Abstract**

Aging is a complex and universal phenomenon. In the last few decades, application of molecular genetics to the study of aging in model organisms has revealed genes/pathways with conserved effect on lifespan across species. However, the molecular causes of aging and death at the cellular level remain elusive. In the past few years, we have used systems biology approaches to tackle aging in the single cell organism yeast. We have developed microfluidic systems that allow us to directly observe the process of aging at the molecular level in single cells throughout their lifespan. Parallel to the development of single cell technology, we have developed new genetic systems that enable us to perform high-throughput screening of mutations/drugs that extend lifespan. Combined with various functional genomics tools, we aim to reconstruct the global gene regulatory networks for aging. I will use the example of caloric restriction to demonstrate how the systems biology approach can shed light on the mechanisms that connect cell metabolism to lifespan regulation.

*All Interested Are Welcome!*