



Department of Psychology
The University of Hong Kong

香港大學心理學系

Departmental Seminar (Via Zoom)

Circadian Rhythms: Analytical Approaches and Novel Insights into Cognitive Health in Older Adults

10:00a.m. – 11:00a.m. | February 23, 2022 (Wednesday) HK time



Dr. Peng LI

Assistant Professor of Medicine
Harvard Medical School
Harvard University

Abstract

The activities of living species are regulated by an internal clock with a ~24-hour beat which is in synchrony with the Earth's rotation. It has been hardwired into our DNA with the evolution of life on this planet. Chronobiology is a field devoted to studying biological rhythms. Analytical approaches have been developed over the years to characterize the rhythms and to understand the intactness of circadian function. Circadian disturbances are emerging as potential contributors to adverse health consequences including neurocognitive disorders or degenerations such as Alzheimer's disease (AD). Animal models also demonstrate a putative causal role of circadian dysregulation and AD pathogenesis. In this talk, I will first present commonly used and novel approaches in the field of chronobiology to analyze continuously monitored physiological signals for circadian function. I will then present results from our recent translational studies in older adults that provide novel insights into cognitive health. I will talk about the interplay between aging and Alzheimer's that differentially influence the longitudinal profile of circadian rhythms. I will also present results that demonstrate a potential bidirectional link between circadian dysregulation and cognitive impairment or AD.

About the Speaker

Dr. Peng Li is an Assistant Professor of Medicine at Harvard Medical School. He is an Associate Physiologist in Division of Sleep and Circadian Disorders, Brigham and Women's Hospital, and the Research Director of the Medical Biodynamics Program. He is also an Associate Member of the Broad Institute of Harvard and MIT. Dr. Li is interested in understanding sleep/circadian disturbances as potential risk factors of neurodegeneration or cognitive complications. As a trained biomedical engineer during his Ph.D., Dr. Li is also interested in designing new tools through biomedical signal analyses to predict disease progression and monitor health status. His work has been published in *Alzheimer's & Dementia*, *Science Translational Medicine*, *Sleep*, and *Neurobiology of Aging*, etc.

Zoom Meeting

<https://hku.zoom.us/j/3951550048?pwd=SncvL3RYakEycUtpL29vdDJEIdlEwdz09>

Meeting ID: 395 155 0048 | Password: psyc



~All are Welcome~

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