



Department of Psychology  
The University of Hong Kong

香港大學心理學系

## Departmental Seminar

# How Does Sleep Loss Affect Our Brain, Behavior, and Mood

11:00 a.m. – 12:00 n.n. | March 7, 2024 (Thursday)

Rm 813, 8/F, The Jockey Club Tower | Centennial Campus | The University of Hong Kong



**Dr. Hengyi RAO**

Associate Professor

Perelman School of Medicine

University of Pennsylvania

### Abstract

Insufficient sleep has multiple etiologies and is pervasive in modern societies, particularly among high school and college populations. Billions of young people sleep less than 7 hours per night, which is the minimum sleep duration to prevent cumulative deterioration in cognitive performance. Sleep loss not only impairs our cognition and mood, but also increases the risk for multiple diseases such as depression, diabetes, obesity, and prospective mortality. Specific neurocognitive domains significantly impaired by sleep deprivation include vigilance, attention, memory, and executive functions. This presentation will share insights from recent multimodal brain imaging research conducted by our team and other groups, highlighting the adverse effects of sleep deprivation on brain function, cognitive performance, and mood, as well as the connection between brain dysfunction and behavioral deficits resulting from insufficient sleep.

### About the Speaker

Dr. Hengyi Rao currently holds the position of Associate Professor at the University of Pennsylvania Perelman School of Medicine, University of Pennsylvania. He is also the founding director of the Magnetic Resonance Imaging Research Center at Shanghai International Studies University and leads the Shanghai Key Laboratory of Brain-Machine Intelligence for Information Behavior. Dr. Rao has dedicated his career to advancing the field of non-invasive multimodal neuroimaging techniques, with a focus on elucidating the neural mechanisms underlying sleep, fatigue, and decision-making. His work is supported by multiple grants from the National Institutes of Health (NIH) and the National Natural Science Foundation of China. Dr. Rao has published over 200 papers and reports in prestigious international journals and conferences, including *Science*, *Nature Neuroscience*, *PNAS*, *American Journal of Psychiatry*, *Biological Psychiatry*, *NeuroImage*, and *SLEEP*. His work has been cited over 10,000 times, with an h-index of 46. He also serves as an editorial board member for various journals such as *SLEEP* and as a peer reviewer for funding projects in the United States, Canada, the United Kingdom, China, and Hong Kong.

### Zoom Meeting (For participants who couldn't attend the Seminar in person)

<https://hku.zoom.us/j/3951550048?pwd=SncvL3RYakEycUtpL29vdDJEEdlEwdz09>

Meeting ID: 395 155 0048 | Password: psyc



~All are Welcome~

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