



THE CHINESE UNIVERSITY OF HONG KONG
Department of Physics
Institute of Theoretical Physics
SEMINAR

**From Proton Transfer to Protein Quake in
Biological Signaling**

by

Professor Aihua Xie (謝愛華教授)

Department of Physics
Oklahoma State University

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Time: 2:30 - 3:30 p.m.

Place: L4, Science Centre, CUHK

ALL INTERESTED ARE WELCOME

Abstract

Proton transfer is a fundamental process in protein function. Despite extensive studies, the mechanism of proton transfer, in particular what causes a proton to transfer from a proton donor to an acceptor, remains elusive. This talk consists two parts. The first part is to explore the biological function of proton transfer in signaling, largely based on experimental studies. The second part is to uncover the mechanism of proton transfer, achieved by developing and employing an innovative approach that integrates structural dissection, energy landscape, and first principle calculation (density functional theory). We will discuss how the lessons learned may be applied to understand proton transfer in general.

Enquiries: 2609 6339