THE CHINESE UNIVERSITY OF HONG KONG
Department of Physics

SEMINAR

Detecting Strongly Lensed Gravitational Waves

by

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Place: Rm LG23, Science Centre North Block, CUHK

ALL INTERESTED ARE WELCOME
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Abstract

If a massive object (e.g. a galaxy) lies along the line-of-sight to the source of gravitational waves (GW), it can bend their propagation paths. Strong lensing of GWs occurs when multiple paths bend towards the observer, leading to multiple copies of the same signal arriving at our detectors at different times. If detected, such lensed GWs can be used for improving sky localisation and polarization measurements of the GW sources, as well as for studying dark matter and cosmology at high redshifts. However, the prerequisite problem of identifying such images from GW data is statistically as well as computationally challenging. In this talk, I will present some of the recent developments in GW strong lensing search.

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