

## Distinguished Science Seminar

### **Einstein's Messengers: A new window on the Universe** 愛因斯坦的信使：探視宇宙的新窗戶



**Speaker:** Prof. Tjonnie G. F. Li  
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**Date:** 4 March 2016 (Fri)

**Time:** 1700 – 1830

**Venue:** MBG07, Patrick Lee Wan Kueng  
Academic Building, Lingnan University

**Language:** English

**ILP:** 1.5 Units (Intellectual Development)

Einstein's theory of General Relativity revolutionized the way we think about space, time and the Universe. Today, this pillar of modern physics still allows scientists to accurately describe the motion of celestial bodies and astronomical phenomena. A cornerstone of General Relativity is the existence of gravitational waves: ripples in the fabric of spacetime that travel at the speed of light.

On 14 September 2015, a hundred years after their prediction, the LIGO experiment recorded the first ever detection of gravitational waves. I will take you on a journey through the science behind these minute disturbances in spacetime. In particular, I will describe how gravitational waves are emitted by the most violent phenomena in the Universe such as the collision of Black Holes, why we need the world's most sensitive length-measuring devices to detect them, and how they can revolutionise our understanding of the Universe.