Fundamental Performance Possibilities and Limits of Quantum Sensors

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Time:	5:00 p.m. - 6:00 p.m.
Venue:	Theatre B, Chow Yei Ching Building, HKU
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Abstract:
The performance of radar and other sensors may be improved if the so-called non-classical quantum states are utilized in lieu of conventional sources such as ordinary lasers. We will review some basics of quantum optics and describe the prospects of non-classical quantum sensors in real world applications.

Speaker:
Horace Yuen graduated from Pui Ching Middle School in Kowloon and got all his degrees in Electrical Engineering from MIT. His main areas of research have been in quantum communications, quantum optics, quantum measurements and quantum cryptography. He is currently professor of electrical engineering and computer science as well as professor of physics and astronomy at Northwestern University in greater Chicago. His paper on "squeezed states" is collected in One Hundred Years Of Physical Review published by the American Physical Society in 1993. He received the International Quantum Communications Award in 1996 and the IEEE/LEOS Quantum Electronics Award in 2008.