



20 May 2024 (Mon)



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7.00pm – 9.00pm



BEM CPD Hours: 2  
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## Synopsis

The talk will explain the puzzling nature of quantum physics, particularly entanglement and correlations in the quantum world, the theme behind the 2022 Nobel prize in physics and how this can be understood and has been used to develop disruptive quantum technology. Recent progress and development of using the spooking concepts of quantum physics in technology hold exciting future prospects.

Quantum optical communications provide cybersecurity through secure encryption while the development of quantum computers with awesome power is most threatening. Other quantum capabilities including quantum metrology and sensing, will also be discussed.



Speaker:  
**Prof Dr Raymond Ooi**

## About the Speaker

Prof Dr Raymond Ooi is a quantum physicist with 25 years of research experience, has produced more than 120 publications (in WoS mainly Q1 journals) on a range of topics in quantum optics, nonlinear optics, plasmonic and laser interactions. He was elected a Fellow of the Academy of Sciences Malaysia (ASM) in 2016. In 2013, he won the Malaysian Toray Science Foundation (MTSF) Science & Technology Award.

Raymond Ooi obtained his Dr.rer.nat (PhD) from University Konstanz, Germany. He spent 3 years as a postdoc at Texas A&M University and was a regular Visiting Scientist at Princeton University and Max-Planck Institute for Quantum Optics. He then conducted research at KAIST and taught at Korea University. He joined Universiti Malaya in 2010 and initiated "Quantum and Laser Science" research lab equipped with femtosecond laser optics facility under High Impact Research grant. Raymond is the Principal Investigator for the national quantum technology research programme funded by MOHE. He has 2 patents and has been invited/plenary speaker at more than 30 international conferences. In 2018 he initiated and chaired the first international conference on Quantum and Nonlinear Optics (QNO2018) that was attended by pioneers in the field and secured three international funds to run the conference. He served as a Judge for MIT Technology Review "Innovators Under 35 Asia Pacific".

Currently he is the Editorial Board member for the prestigious journals; the Philosophical Transactions of the Royal Society A and the New Journal of Physics. Raymond has published a book "The Way of Creation, Nature & Life: Physics and Mathematics Perspectives", and wrote several articles in the media, connecting science with recent topics like green energy and climate change. His current interest is to apply quantum principles to understanding Nature, Life, Health, Mind, Spirituality and Traditional Knowledge.



Moderator:  
**Mr R. Sivarama**