Face-to-Face with Nobel Laureates in Physics at HKUST

Two Nobel Laureates in Physics shared their scientific insight and personal experience with faculty, students, and alumni at the Hong Kong University of Science and Technology (HKUST) today (14 June).

Prof Charles Hard Townes and Prof Gerardus 't Hooft, two of the most influential scientists of modern times, took part in "Dialogue with Giants in Physics" organized by the HKUST School of Science.

Known as "Father of the Laser", Prof Townes is University Professor of the University of California at Berkeley. In 1951, he conceived the idea of "masers" (microwave amplification by stimulated emission of radiation) and obtained the first amplification and generation of electromagnetic waves by stimulated emission in 1954. This groundbreaking work marked the beginning of the "laser era", culminating in his Nobel Prize in Physics in 1964, and lasers have since moved out of basic research into widespread applications.

Prof 't Hooft, Professor of Physics at the University of Utrecht, The Netherlands, specializes in elementary particle physics. His PhD thesis in 1971 solved the problem of renormalization of Yang-Mills fields, work in the gauge field theory that helped explain three out of four fundamental forces of the universe. He received the Nobel Prize in 1999 for placing particle physics theory on a firmer mathematical foundation. Prof 't Hooft's quest to account for the yet unresolved mystery of the fourth fundamental force, gravity, is still continuing.

Prof Paul Ching-Wu Chu, President of HKUST, said the visit by the two Nobel Laureates in Physics was an exciting event. "Learning directly from two of the great physicists is a valuable and eye-opening experience for HKUST students. I look forward to organizing more academic events at this level to help focus our students' sights on the highest level of scientific discovery," said Prof Chu.