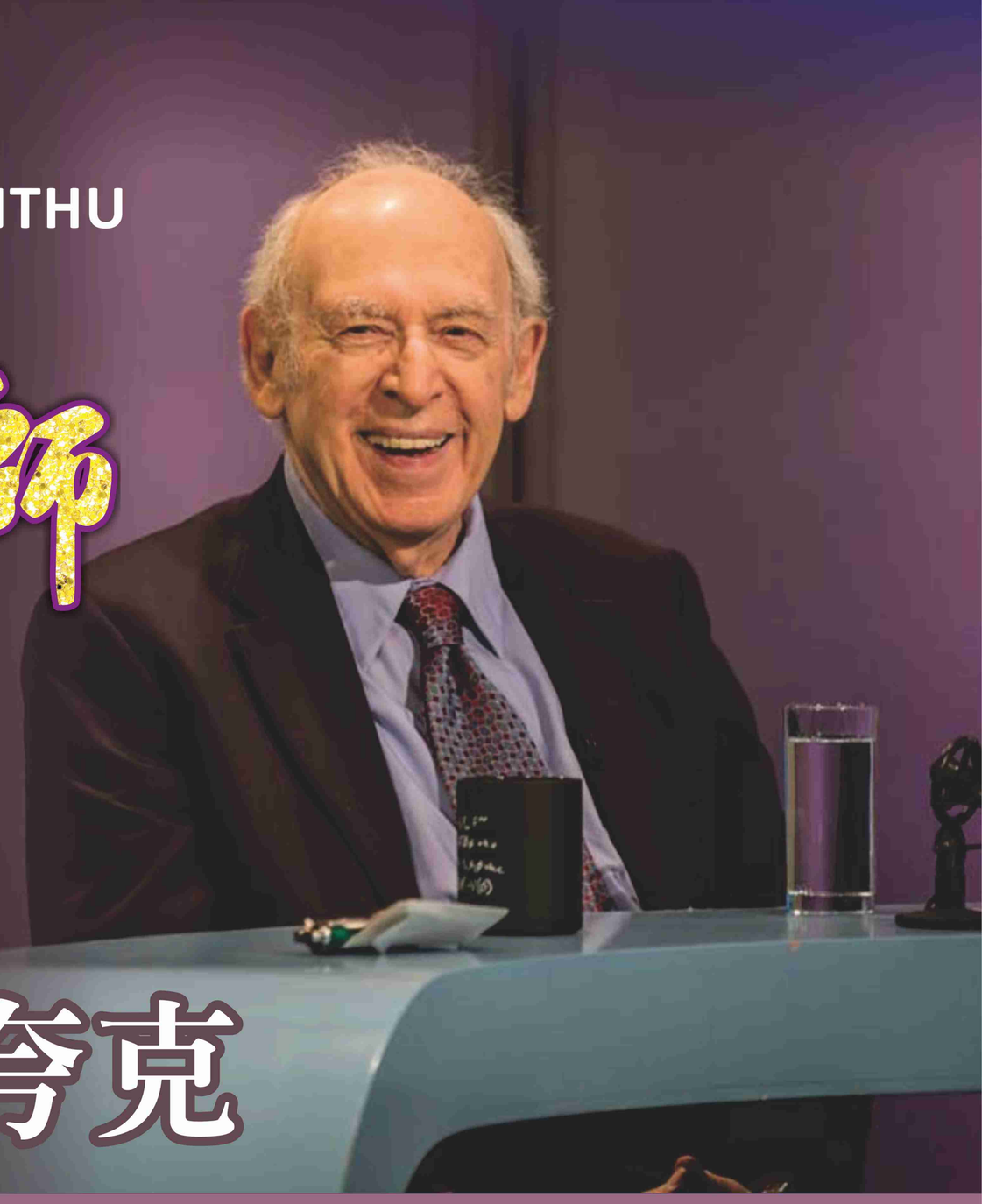
2016 Nobel Laureates Lectures at NTHU

諾貝爾大師在清華



觀察質子中的夸克

你知道嗎？其實質子及中子並不是最小的粒子。
1990年諾貝爾獎得主Friedman教授將在這個演講中，娓娓回顧當初他和其他人怎麼由一系列的實驗，看出質子是由三個帶著奇妙電荷且沒有體積的上/下夸克($+\frac{2}{3}e$, $-\frac{1}{3}e$)所構成的，以及這個重要發現怎麼改變並重塑人類看待這個世界的觀點。

The Observation of Quarks in the Proton

Great progress was made in the 20th century in the understanding of the structure of the atom. We now know that the basic building blocks of all atomic matter are electrons and quarks. But the quark model, which embodied a radically new conceptual view of the structure of matter, was fiercely debated and generally rejected by the physics community. Its ultimate acceptance took well over a decade and occurred only after inescapable and compelling experimental evidence was obtained.
Quarks were finally discovered in a series of high-energy electron scattering experiments. In these experiments, the electron beam and the detecting equipment were the equivalent of a very powerful electron microscope that probed the interiors of the proton and neutron. Point-like constituents were observed inside, which were identified as quarks. This discovery changed our view of the basic structure of matter and led to a new theory of the strong interaction, quantum chromodynamics.

1990年諾貝爾獎得主(Nobel Laureate 1990)

Jerome Friedman

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學習資源中心旺宏館國際會議廳

■ 報名網址 https://goo.gl/forms/owNybgzuTygOZFVx2

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