



清华大学高等研究院

Institute for Advanced Study, Tsinghua University

学术报告

- Title:** How physics comes to sing in mathematical tune
- Speaker:** 杨信男 (Shin-Nan Yang)
Professor Emeritus at Taiwan University
- Time:** 4:00pm, Monday, Oct 31, 2016
- Venue:** Conference Hall 322, Science Building, Tsinghua University

Abstract

我們現在都已習以為常地接受科學的法則、定律應該可以數學形式表述，尤以物理為然。對物理的理論架構我們不僅要求其數學的嚴謹性，也要求它要全盤一致，即自洽性。這樣的巨塔當然不是一天可以造成，而是在約四千年的歷史進程中，經由許多智者接續努力建造而成的。在本演講中，我將概述自巴比倫時期開始，逐步讓人類得以確立以數學語言來解開自然奧秘的過程。

That any scientific law and theorem should be expressible in mathematical terms is nowadays taken for granted. This is especially true in physics, where any theory is required to be mathematically complete and self-consistent. Such a high level of sophistication is not achieved in one day, but rather via the consecutive efforts of many great scientists over the 4,000 years of history. In this talk, I'll elaborate and recount the seminal developments which led mathematics to become the language of all physical theories, starting from the Babylonian period, chronologically.