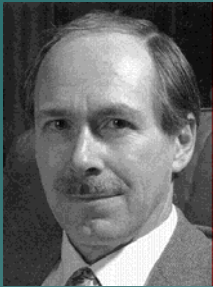


慶應義塾大学 21世紀COEプログラム
「統合数理科学：現象解明を通じた数学の発展」



Pathways Lecture Series in Mathematics, Keio

1999年度ノーベル物理学賞受賞

Speaker: Prof. Gerard 't Hooft
(Utrecht University, Netherlands)

Avenue: Room 14-201
Faculty of Science and Technology,
Yagami Campus, Keio University

Time & Date: 15:00 – 16:00
February 3rd Thursday 2005

***The biggest mysteries of our physical world:
why is there quantum mechanics,
and why is the vacuum stable?***

In our attempts to reconcile Quantum Mechanics with Einstein's theory of the gravitational force, the need is felt to dig deeper into the foundations of Quantum mechanics. The quantum mechanical nature of the Laws of Physics as we experience them today, may well be attributed to Chaotic phenomena at the Planck scale, 10^{-33} cm. These chaotic fluctuations can indeed be seen to allow for a "quantummechanical logic", except for one thing: it is difficult to understand why one particular chaotic state exists that appears to be completely stable: the vacuum state. Yet this would have been the most elegant way to understand the behaviour of black holes at the Planck scale, and moreover: nature seems to be giving us a clue: the gravitational force appears to be very finely tuned to be zero precisely at the vacuum state.

* 会場整備の都合により、本講演にご参加をご希望の方は事前に下記連絡先まで Emailにてご連絡頂けますようお願い申し上げます。定員に達し次第締め切らせていただきます。

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