

中央大學物理學系

Department of Physics, National Central University



Colloquium

From the Standard Model of Fundamental Particles to Quantum Gravity

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Time: 14:00-16:00

Abstract

All matters are made of very tiny particles, called fundamental particles, and the properties may be understood once the interactions of the fundamental particles are known. I start with the summary of the structure of matters and what are the fundamental particles. There are four fundamental interactions among these; strong, electromagnetic, weak and gravitational interactions, and we have an established theory of the first three of the interactions. This is the Standard Model. However we have not yet understood the oldest known gravitational interaction. I try to explain the approach to the quantum gravity using renormalization group and describe our recent results on quantum effects to the black holes.