"We must admit with humility that, while number is purely a product of our minds, space has a reality outside our minds, so that we cannot completely prescribe its properties a priori."

— Carl Friedrich Gauss

The Trivial Notions Seminar
Proudly Announces

15 theorem and 290 theorem

A talk by

Yong Suk Moon

Abstract

A positive definite quadratic form is called *universal* if it represents all positive integers. In 1770, Lagrange proved that the form $x^2+y^2+z^2+t^2$ is universal, but the classification of universal quadratic forms had not been studied deeply until the twentieth century.
Conway and Schneeberger showed in 1993 that a positive definite quadratic form having an integer matrix is universal if it represents all positive integers up to 15. And in 2005, Bhargava and Hanke proved that an integer-valued positive definite quadratic form is universal if it represents all positive integers up to 290. In this talk, we will explain these two theorems, and discuss some ideas for the proof.

Wednesday, April 27$^{\text{th}}$, at 12:00 pm
Science Center 222