



COLLOQUIUM

A combinatorial approach to partition identities from representation theory

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Abstract

A partition of a positive integer n is a non-increasing sequence of positive integers whose sum is n . A Rogers-Ramanujan type identity is a theorem stating that for all n , the number of partitions of n satisfying some difference conditions equals the number of partitions of n satisfying some congruence conditions. Lepowsky and Wilson were the first to exhibit a connection between Rogers-Ramanujan type partition identities and representation theory in the 1980's, followed by Capparelli, Meurman, Primc, and others. This gave rise to many interesting new identities unknown to combinatorialists.

In this talk I will present a combinatorial approach which allows one to refine and generalise partition identities. I will illustrate it on Capparelli's identity and one of Primc's identities from crystal base theory.

Date: April 29, 2019 (Monday)

Time: 3:00 - 4:00pm

Venue: Room 210, Run Run Shaw Bldg., HKU