



Contribution ID: 3

Type: **not specified**

## Partitions, Eisenstein Series, and Their Applications

*Friday 6 March 2026 13:00 (40 minutes)*

This talk explores structural connections between integer partitions and Eisenstein series, with an emphasis on the arithmetic implications of modularity and quasi-modularity. As a primary example, we study generating functions arising from MacMahon-type partition variants and show that they admit quasi-modular descriptions. This framework provides effective control over their coefficients and leads to arithmetic applications, including a new expression for prime detection.

**Presenter:** KANG, Soon-Yi (Kangwon National University)