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# MODULI OF K3 SURFACES FOR THE SIMPLEST LATTICE WITH THE KNESER CONDITIONS AND MODULAR FORMS

Atsuhira Nagano

Kanazawa University

## Abstract

Siegel modular forms of degree 2 are very important in number theory and originally coming from the moduli of abelian varieties. In 2002, Clingher-Doran studied Siegel modular forms via the moduli of lattice polarized K3 surfaces. In this talk, we will consider a natural extension of the results of Clingher-Doran. Namely, we will study a family of lattice polarized K3 surfaces, which contains the family of Clingher-Doran. Our family corresponds to the simplest lattice with the Kneser conditions, which is an arithmetic condition of quadratic forms. We will see the structure of the ring of modular forms for our lattice via K3 surfaces.

**Date :** Friday, June 28, 2019

**Time:** 14:00

**Place:** IMBM Seminar Room, Boğaziçi University South Campus