



ODTU-Bilkent Algebraic Geometry

“On K3 surfaces covering an Enriques surface”

By

Serkan Sonel
(Bilkent)

Abstract: We will continue the subject of the previous talks, viz. a characterization of the K3-surfaces covering an Enriques surface.

Following Nikulin, we will:

- (1) explain that the existence of a fixed point free involution depends on the *genus* of the transcendental lattice only;
- (2) give the answer for *most* genera, leaving just a few of them open;
- (3) outline the difficulties that may arise in the case of those few open genera.
- (4) determine the complete list of genera of positive definite lattices of arbitrary rank each of whose members represents 1 for rank different from 2 and 3. As an application, we classify K3 surfaces which do not cover any Enriques surface.

This is joint work with SIMON BRANDHORST, DAVIDE CESARE VENIANI.

Date: 6 December 2019, Friday

Time: 15:40 +

Place: Mathematics Seminar Room, SA- 141

Tea and cookie will be served before the talk. You are most cordially invited.