



A.G.O. FRiDAYS

(Algebraic Geometry On Fridays)

Involutions on surfaces of general type with $p_g=0$

Speaker: Shin, Yongjoo
(KAIST)

ABSTRACT

Let S be a minimal surface of general type with $p_g=0$ having an involution over the field of complex numbers. It is well known that if the bicanonical map of S is composed with the involution then the quotient of S by the involution is rational or birational to an Enriques surface. In this talk, I explain that for $K_{S^2}=5,6,7,8$ and an involution for which the bicanonical map of S is composed with the involution, the quotient of S by the involution is rational. This result applies in part to surfaces S with $K_{S^2}=5$ for which the bicanonical map of S has degree 4 and is composed with an involution. Moreover when the bicanonical map of S is not composed with the involution I consider a list of the possible models of the quotient of S and their branch divisors induced by the involution. Surfaces S with $K_{S^2}=7$ for which the quotient of S by the involution is birational to an Enriques surface are treated in detail.

- **Time & Date : 02:00p.m.~03:00 p.m.**
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- **Place : Math Science Building room 404**