ÇANKAYA UNIVERSITY
FACULTY OF ARTS AND SCIENCES
DEPARTMENT OF MATHEMATICS

SEMINAR

Title: Fixed Point Free Group Actions on Fiber Products of Rational Elliptic Surfaces

SPEAKER : **Assoc. Prof. Dr. Tolga Karayayla**

DATE : **29th November, 2019**

TIME : **13:30**

PLACE : **Çankaya University (Central Campus), R-213**

For two relatively minimal rational elliptic surfaces with section, their fiber product X over P^1 is known as a Schoen 3-fold. X is a simply connected Calabi-Yau 3-fold. The question is whether non-simply connected Calabi-Yau 3-folds can be obtained as the quotient of Schoen 3-folds under the fixed point free group actions on X. Bouchard and Donagi have listed some abelian groups with fixed point free actions on X when X is a smooth 3-fold (2008) and Karayayla has shown that the given list is complete (2017). The remaining question is when X is a singular 3-fold is there a desingularization of X such that the desingularization is a simply connected Calabi-Yau 3-fold and there is a fixed point free group action on this desingularization. Small resolutions must be used instead of blow ups so that the desingularization of X is a Calabi-Yau 3-fold. In the talk I will discuss how to generalize the solution of the problem in smooth X case to the solution of singular X case.

All interested are cordially invited.

ADDRESS : **Eskişehir Yolu 29.km, 06810, Etimesgut/ANKARA**