



Mathematics Colloquium

Construction of new exotic 4-manifolds and Lefschetz fibrations

BY

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Abstract: This talk consists of two parts. In the first part, we will present a new construction of symplectic 4-manifolds homeomorphic but not diffeomorphic to $(2h+2k-1)\mathbb{C}P^2 \# (6h+2k+3)(-\mathbb{C}P^2)$, $(h,k) \neq (0,1)$, via Lefschetz fibrations and Luttinger surgery on the product manifolds $\Sigma_g \times T^2$. In the second part, we will construct families of Lefschetz fibrations over S^2 using finite order cyclic group actions on $\Sigma_g \times \Sigma_g$.

These are joint works with Anar Akhmedov.

Date: 17 July 2018

Time: 15:45

Place: Mathematics Seminar Room, Bilkent.

Tea and cookies will be served before the seminar.