

Speaker: **Finashin, Sergey**

Title: *Knotting of Curves in Complex Algebraic Surfaces*

Authors: Sergey Finashin

Affiliations: Middle East Technical University (Ankara)

Abstract: **Theorem.** For any $d > 4$ there exists an infinite family of smooth surfaces, F_i , in CP^2 which are homeomorphic to an algebraic curve, A , of degree d , realize the same homology class as A and have the same as A (i.e., abelian) fundamental group of the complement, $\pi_1(CP^2 - F_i)$, but with the pairs (CP^2, F_i) pairwise smoothly non-equivalent.

Surfaces F_i are obtained from A by an annulus rim surgery. This surgery construction is a modification of the rim surgery used by Fintushel and Stern for similar knotting in the case of trivial fundamental group of the complement.

The annulus rim surgery can be also used for knottings of curves in any complex algebraic surface provided the curves admit certain degenerations.