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Knotting of algebraic curves in complex surfaces

of

Sergey Finashin

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Abstract: For any $d \geq 5$, I constructed infinitely many pairwise smoothly non-equivalent surfaces $F \subset \mathbb{C}P^2$ homeomorphic to a non-singular algebraic curve of degree d , realizing the same homology class as such a curve and having abelian fundamental group $\pi_1(\mathbb{C}P^2 \setminus \text{stmin } F)$. It is a special case of a more general theorem, which concerns for instance those algebraic curves, A , in a simply connected algebraic surface, X , which admit irreducible degenerations to a curve A_0 , with a unique singularity of the type X_g , and such that $A \cdot A_0 > 16$.

 [Keywords](#)
 [Authors](#)



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math@tubitak.gov.tr

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