Mathematics, Statistics, and Computer Science   **@ UIC**

Departmental Colloquium

The topological closure of algebraic and semi-algebraic flows on complex and real tori (joint work with Y.~Peterzil)

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Abstract: Let A be a complex abelian variety and $\pi\colon \mathbb{C}^n \to A$ be the covering map.

It follows from a theorem of Ax that for an irreducible subvariety $X \subseteq \mathbb{C}^n$ the Zariski closure of $\pi(X)$ is a coset of an algebraic subgroup of A.

In this talk we consider \emph{the topological closure} $\pi(X)$ of an algebraic subvariety X of $\mathbb{C}^n$ and describe it in terms of finitely many algebraic families of cosets of real subtori.

We also obtain a similar description when A is a real torus and X is a semi-algebraic set.

Friday, October 27 at 3:00 PM in SEO 636