THE UNIVERSITY   **OF HONG KONG**

Institute of Mathematical Research
Department of Mathematics

Geometry Seminar

Foliations in abelian schemes

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Abstract

Let $\mathcal{A}/S$ be an abelian scheme of relative dimension g over a smooth quasi-projective complex variety. Suppose it has trivial isotrivial part. Restricted to a non-empty open simply-connected subset Δ, there is a natural real-analytic isomorphism $i\colon \mathcal{A}|_\Delta \cong \Delta \times \mathbb{T}^{2g}$. We prove the following result: if an irreducible subvariety $\mathcal{X}$ of $\mathcal{A}$ satisfies $\mathcal{X}|_\Delta = i^{-1}(\Delta \times Y)$ for some subset $Y \subset \mathbb{T}^{2g}$, then up to a finite cover $\mathcal{X}$ is the translate of an abelian subscheme by a torsion section. The proof uses o-minimal theory. This is joint work with Philipp Habegger.

Date:	January 8, 2018 (Monday)
Time:	4:00 – 5:00pm
Venue:	Room 210, Run Run Shaw Bldg., HKU

All are welcome