

GEOGRAPHY OF FIBERED VARIETIES

Speaker: Zhiming Guo
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Time：Tue, Nov 17th, 10:00 - 10:30
Venue: Room 106, SCMS

Abstract:

This talk concerns the geography of fibered varieties, with particular emphasis on numerical invariants of fibered surfaces and their relation to the geometry of the fibration. I will discuss slope inequalities and the realization of slopes for semistable fibrations, together with related questions for hyperelliptic and trigonal fibrations. These problems are closely related to the classical geography of algebraic surfaces. Fibration structures also arise naturally in other settings: surfaces with maximal abelian automorphism groups often admit distinguished fibrations, while algebraically integrable foliations can be studied through the corresponding fibrations. I will also discuss possible extensions of these questions to higher-dimensional varieties.