

Relative Noether inequality on fibered surfaces

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Abstract : I will discuss linear series on fibered surfaces from an Arakelov geometry point of view, which leads to a relative version of classical Noether inequality. I will also talk about some consequences of this relative Noether inequality : 1) a new proof of slope inequality on fibered surfaces; 2) the proof of Severi conjecture for surfaces of maximal Albanese dimension. It is a joint work with Xinyi Yuan.