

Sera

Title: Lelong numbers of direct images of generalized Monge-Ampère products

Abstract:

In this presentation, we consider generalized (mixed) Monge-Ampère products of quasisubharmonic functions (with and without analytic singularities) as they were introduced and studied in several articles written by subsets of M. Andersson, Z. Błocki, R. Lärkäng, H. Raufi, J. Ruppenthal, E. Wulcan and the speaker. We continue these studies and present estimates for the Lelong numbers of pushforwards of such products by proper holomorphic submersions. Furthermore, we apply these estimates to Chern and Segre currents of pseudoeffective vector bundles. Among other corollaries, we obtain the following generalization of a recent result by X. Wu. If the nonnef locus of a pseudoeffective vector bundle  $E$  on a Kähler manifold is contained in a countable union of  $k$ -codimensional analytic sets, and if the  $k$ -power of the first Chern class of  $E$  is trivial, then  $E$  is nef.