

# COMMUTATOR TYPE AND LEVI TYPE OF A SYSTEM OF CR VECTOR FIELDS

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**Abstract:** Finite type conditions arise naturally during the study of weakly pseudoconvex hypersurfaces in  $\mathbb{C}^n$ , which are defined to measure to degeneracy of the Levi form.

Let  $M$  be a pseudoconvex hypersurface in  $\mathbb{C}^n$ ,  $p \in M$ , and let  $B$  be a subbundle of the CR tangent bundle  $T^{(1,0)}M$ . The commutator type  $t(B, p)$  measures the number of commutators of the sections of  $B$  and their conjugates needed to generate the contact tangent vector at  $p$ . The Levi type  $c(B, p)$  is concerned with differentiating the Levi form along the sections of  $B$  and their conjugates. It is believed that these two types are the same, which is known as the generalized D'Angelo Conjecture. In this talk, I shall talk about the recent progress on this conjecture, which is based on the joint works with X. Huang and P. Yuan.