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Title: A Grassmannian technique and the Kobayashi Conjecture

Abstract:

An entire curve on a complex variety is a holomorphic map from the complex numbers to the variety. We discuss two well-known conjectures on entire curves on very general high-degree hypersurfaces $X$ in $\mathbb{P}^n$: the Green-Griffiths-Lang Conjecture, which says that the entire curves lie in a proper subvariety of $X$, and the Kobayashi Conjecture, which says that $X$ contains no entire curves. We prove that (a slightly strengthened version of) the Green-Griffiths-Lang Conjecture in dimension $2n$ implies the Kobayashi Conjecture in dimension $n$. Our technique is substantially simpler than previous approaches to this question, and has already led to improved bounds for the Kobayashi Conjecture. This is joint work with David Yang.