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Andrew Zimmer* (aazimmer@uchicago.edu). *Characterizing strongly pseudoconvex domains.*

In this talk I will describe some characterizations of strong pseudoconvexity which only use the intrinsic complex geometry of a domain. For instance, we show that for convex domains with $C^{2,\epsilon}$ boundary strong pseudoconvexity can be characterized in terms of the behavior of the squeezing function near the boundary, the behavior of the holomorphic sectional curvature of the Bergman metric near the boundary, or any other reasonable measure of the complex geometry. The first characterization gives a partial answer to a question of Fornæss and Wold. I will also describe the proofs which rely on estimating the “Lyapunov exponents” of the “geodesic flow” induced by the Kobayashi metric. (Received February 27, 2017)