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Entire area-minimizing surfaces in $\mathbb{R}^n$

It's well-known that any holomorphic subvariety is area-minimizing in its homology class. In this talk we consider the converse question, and we show that any entire area-minimizing 2-surface $M^2 \subset \mathbb{R}^n$ of density two at infinity (that is, asymptotic to a pair of planes, possibly coincident) is either planar or is a degree-2 algebraic variety in some $\mathbb{C}^2 \subset \mathbb{R}^n$. We additionally prove algebraicity of M^2 when the tangent cone at infinity is multiplicity-one. This is joint work with Luis Atzin Franco Reyna and Paul Minter.