

Almgren-type monotonicity formulas

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In this talk, we will explore the celebrated Almgren's monotonicity formula. This beautiful result with far-reaching consequences states that if u is harmonic in the unit ball, then a certain frequency function $N(r)$ is non-decreasing. Moreover, $N(r)=k$ for all $r<1$ if, and only if, u is homogeneous of degree k . We will then discuss some of the many applications of this formula, and recent developments connected to it. This is based on joint work with Blair Davey.

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