# Unique continuation for elliptic equations with nonsmooth coeff icients

## Herbert Koch

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Let $P$ be a differential operator and let $V$ and $W$ be measurable functions. We consider sufficiently regular functions $u$ which satisfy

$$|Pu| \leq V|u| + W|\nabla u|$$

in a ball. We say the triple $(P, V, W)$ has the strong unique continua tion property (SUCP) if u vanishes if it vanishes of infinite order at one point.

**Theorem** (Koch, Tataru): Let $n > 2$ and let $P$ be an elliptic partia l differential operator of second order with Lipschitz continuous coefficients. The triple $(P, V, W)$ has the SUCP if $V \in L^{n/2}$ and $W \in L^{n+\epsilon}$.

The talk explains this result. It will give a sketch of the proof and explains its relation to questions occuring in the context of nonlinear dispersive equations.
The talk is based on joint work with D. Tataru.