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Martino Fassina* (fassina2@illinois.edu). *Non-solvability of elliptic operators in the flat category.*

Let $U \subset \mathbb{R}^n$ be an open set. We say that a smooth complex-valued function f on U is flat at $p \in U$ if its k -jet vanishes at p for all k . In this talk we present a class of elliptic operators L on $\mathbb{R}^n, n \geq 2$, with the following property: there exists a function f flat at a point p such that the equation $Lu = f$ has no local solution u that is flat at p . We show some applications of this fact to Several Complex Variables. This talk is based on joint work with Yifei Pan. (Received September 03, 2018)