
Barcelona Analysis Seminar

2021–2022

URL . <https://mat.uab.cat/web/seminarianalisi/>

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Online streaming (Zoom). <https://ub-edu.zoom.us/j/95538016558>

Regularity of stable solutions to semilinear elliptic PDE

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In this talk we present our recent solution of the following long-standing conjecture: stable solutions to semilinear elliptic equations are bounded (and thus smooth) in dimensions $n \leq 9$.

This result, which was only known to be true for $n \leq 4$, is optimal: $\log(1/|x|^2)$ is a singular stable solution for $n \geq 10$. This is a joint work with X. Cabré, A. Figalli, and J. Serra.