

Christ, Michael

Singularity and regularity – local and global. (English) [Zbl 0913.32003](#)
Doc. Math., Extra Vol. ICM Berlin 1998, vol. II, 627-636 (1998).

We quote the author's abstract: "There exists a smoothly bounded, pseudo-convex domain in \mathbb{C}^2 for which the Bergman projection fails to preserve the class of functions which are globally smooth up to the boundary. The counterexample is explained and placed in a wider context through a broader discussion of the local and global regularity of solutions to subelliptic and more degenerate partial differential equations in various function spaces".

Reviewer: [E.J.Straube \(College Station\)](#)

MSC:

- [32W05](#) $\bar{\partial}$ and $\bar{\partial}$ -Neumann operators
- [35N15](#) $\bar{\partial}$ -Neumann problems and formal complexes in context of PDEs
- [35P30](#) Nonlinear eigenvalue problems and nonlinear spectral theory for PDEs
- [42B99](#) Harmonic analysis in several variables

Keywords:

[hypoellipticity](#); [\$\bar{\partial}\$ -Neumann problem](#); [Bergman projection](#); [global regularity](#)

Full Text: [EuDML](#) [EMIS](#)