

1134-32-317

Yunus E Zeytuncu* (zeytuncu@umich.edu), Dearborn, MI 48128. *Friedrichs Operator on Pseudoconvex Domains in \mathbb{C}^n .*

Let Ω be a smooth bounded domain in \mathbb{C}^n and let $L^2(\Omega)$ denote the space of square integrable functions on Ω with respect to the Lebesgue measure. We denote the subspace of holomorphic functions in $L^2(\Omega)$ by $A^2(\Omega)$ and the Bergman projection from $L^2(\Omega)$ to $A^2(\Omega)$ by \mathbf{B} .

The Friedrichs operator T is a conjugate linear mapping from $A^2(\Omega)$ onto itself, defined by $f \rightarrow \mathbf{B}(\bar{f})$. It was recently observed that this operator exhibits some additional smoothing properties under certain geometric assumptions on the domain. In this talk, after a quick review of earlier results, we will prove that on any smooth bounded pseudoconvex domain Ω the Friedrichs operator T maps $A^2(\Omega)$ to $A^p(\Omega)$ for some $p > 2$. (Received September 11, 2017)