國立中山大學應用數學系
學術演講

講　者：張德健 教授（Georgetown University, USA)

講　題：Cauchy-Szego projections and related topics

時　間：2024/12/24（Tuesday）11:10～12:00

地　點：理 SC 4009-0 教室

茶　會：10:45

Abstract

In this talk, we give a comprehensive review of Calderon-Zygmund operators from the point of view of Cauchy-Szego projections and the sharp estimates of the operators in Hardy spaces. Cauchy-Szego projections is closed related to the Hilbert transform which is a typical example of the so-called "first generation" of singular integral operators and has been studied by mathematicians for many years. We started with the case in unit disk D^1 in $\mathbb{C}^1$ and then move to the unit ball B^{n+1} in $\mathbb{C}^{n+1}$. Furthermore, we studied estimates of this operator in Hardy spaces. If the time allows, the speaker will also discuss analysis on the boundary of the unit ball B^{n+1} in $\mathbb{C}^{n+1}$ which is the famous Heisenberg group H^n :

$$H^n \approx \mathbb{C}^n \times \mathbb{R} = \left\{ (z,t) = (z_1,\ldots,z_n,t) : z \in \mathbb{C}^n, t \in \mathbb{R} \right\}$$

with group law

$$(z,t) \cdot (w,s) = \left(z+w, t+s+2\mathrm{Im}\big[\sum_{j=1}^{n} z_j \bar{w}_j\big] \right).$$

敬　請　公　告！　歡　迎　參　加！

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