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Compactness of Hankel and Toeplitz operators on domains in \mathbb{C}^n

In this talk, I will present various characterizations of compactness of some canonical operators on domains in \mathbb{C}^n . I will highlight how complex geometry of the boundary of the domain plays a role in these characterizations. In particular, I will prove that on smooth bounded pseudoconvex Hartogs domains in \mathbb{C}^2 compactness of the $\bar{\partial}$ -Neumann operator is equivalent to compactness of all Hankel operators with symbols smooth on the closure of the domain. The talk is based on recent joint projects with Željko Čučković and Sönmez Şahutoğlu.