ABSTRACT

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Title: On a reducing subspace problem for proper holomorphic multipliers

Abstract: Let Ω and Ω' be two bounded domains in $\mathbb{C}^n$ and $\boldsymbol{\pi} : \Omega \to \Omega'$ be a proper holomorphic map. Suppose that the group of deck transformations of $\boldsymbol{\pi}$ is a finite pseudoreflection group G and $\mathcal{H}$ is a Hilbert space (consisting of holomorphic functions on Ω) possessing a G-invariant reproducing kernel. We discuss about the joint reducing subspaces of the multiplication operator $M_{\boldsymbol{\pi}}$ on $\mathcal{H}$. We also describe a generalization of Chevalley-Shephard-Todd theorem for the algebra of holomorphic functions on Ω.