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Pseudoconvex homogeneous manifolds

Assume G is a connected complex Lie group with H a closed complex subgroup of G . Then there exists a closed complex subgroup J of G containing H such that the homogeneous fibration $\pi : G/H \rightarrow G/J$ is the **holomorphic reduction** of G/H , i.e., G/J is holomorphically separable and $\mathcal{O}(G/H) \cong \pi^*\mathcal{O}(G/J)$.

In this talk we will discuss what happens if G/H is pseudoconvex, i.e., admits a continuous plurisubharmonic exhaustion function. It turns out that in this setting one is in the best of all possible worlds: G/J is Stein and $\mathcal{O}(J/H) \cong \mathbb{C}$.