XIAOMIN TANG, Huzhou University

Schwarz lemma at the boundary on the classical domain of type IV

Let $\mathcal{R}_{\mathcal{IV}}(n)$ be the classical domain of type $\mathcal{IV}$ in $\mathbb{C}^n$ with $n \geq 2$. The purpose of this talk is twofold. The first is to investigate the boundary points of $\mathcal{R}_{\mathcal{IV}}(n)$. We give a sufficient and necessary condition such that the boundary points of $\mathcal{R}_{\mathcal{IV}}(n)$ are smooth. The second is to establish the boundary Schwarz lemma on the classical domain of type $\mathcal{IV}$. we obtain the optimal estimates of the eigenvalues of the Fréchet derivative for holomorphic self-mappings at the smooth boundary point of $\mathcal{R}_{\mathcal{IV}}(n)$. This is a joint work with Jianfei Wang and TaiShun Liu.