

Plans of my research.

Let G be a connected, semisimple Lie group, and let \mathfrak{g} be its Lie algebra. Then, the adjoint orbit $\text{Ad}(G)X$ through an elliptic element $X \in \mathfrak{g}$ is said to be an *elliptic orbit*. For an elliptic orbit $\text{Ad}(G)X$, it is known that $\text{Ad}(G)X = G/C_G(X)$ is a reductive, pseudo-Kählerian homogeneous space and vice versa. Therefore, it follows that elliptic orbits are related to semisimple pseudo-Hermitian symmetric spaces. My aim on the future is to further investigate this relation.