Speaker: Markus Hunziker (Baylor University)

Title: Highest weight categories related to Hermitian symmetric spaces and applications

Abstract: In this survey talk, we will look at recent results on categories of highest weight modules (with singular infinitesimal character) of Lie algebras associated to Hermitian symmetric spaces. In special cases, these categories were studied by Enright and Shelton in the 1980s. After explaining how to generalize the results of Enright and Shelton (and fill some gaps in the literature), we will discuss several applications in classical invariant theory, representation theory, and mathematical physics.