

Harmonic analysis on symmetric Stein manifolds from the point of view of complex analysis

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Abstract. The classical theory of finite dimensional representations of compact and complex semisimple Lie groups is discussed from the perspective of multidimensional complex geometry and analysis. The key tool is the complex horospherical transform which establishes a duality between spaces of holomorphic functions on symmetric Stein manifolds and dual horospherical manifolds.

Keywords and phrases: Stein symmetric manifolds, horosphere, horospherical Cauchy transform

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