ANALYSSEMINARIET

M. Englis (Prag): Operator models on bounded symmetric domains

ABSTRACT: A classical theorem of Sz.-Nagy and Foias says that any contraction on a Hilbert space is unitarily equivalent to the restriction of the backward shift of infinite multiplicity to an invariant subspace. We discuss a genaralization of this kind of operator models when the contraction is replaced by an n-tuple of Hilbert space operators and the backward shift by the adjoint of the multiplications by the coordinate functions $z_1, \ldots, z_n$ on a suitable Hilbert space $\mathcal{H}$ of analytic functions. In particular, we investigate the case when $\mathcal{H}$ is a weighted Bergman space on a bounded symmetric domain, and also make contact with some recent developments of W. Arveson.

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