Periodic coordinates and a magic formula for finite-gap CMV matrices

09.09 **Benjamin Eichinger**
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Time: Thursday 25.07., 15:30 - 16:00, Room HS 4

Abstract: We prove a bijective unitary correspondence between 1) the isospectral torus of almost-periodic, absolutely continuous CMV matrices having fixed finite-gap spectrum E and 2) periodic block-CMV matrices satisfying a *Magic Formula*. This latter class arises as E-dependent operator Möbius transforms of certain generating CMV matrices which are periodic up to a rotational phase; for this reason we call them "MCMV". Naturally, this has also consequences for the associated Schur functions. We show that for any Schur function associated to a finite-gap CMV matrix (and therefore with almost periodic Verblunsky coefficients) there exists a more general Nevanlinna-Pick interpolation problem with periodic interpolation data.

The talk is based on a joint work with J. S. Christiansen and T. VandenBoom.