

# Toeplitz kernels and $M_z$ -commuting conjugations by Marek Ptak

(University of Agriculture in Kraków, Poland)

We study conjugations in  $L^2(\mathbb{T})$  and their relation with kernels of Toeplitz operators on  $H^2(\mathbb{T})$  space. Such kernels are a generalization of model spaces. We investigate properties of an inequality relation between two unimodular functions defined on the unit circle. This allows us to significantly strengthen previous theorems characterizing all  $M_z$ -commuting and  $M_z$ -conjugations leaving invariant model spaces to the Toeplitz kernels setting.

Joint work with P. Dymek, A. Płaneta.