FINITE BLASCHKE PRODUCTS IN NEVANLINNA-PICK INTERPOLATION

C. Glader
Department of Mathematics, Abo Akademi University
Domkyrkotorget 1, Abo, 20500, Finland
cglader@abo.fi

Finite Blaschke products play an important role in many problems of interpolation in the complex unit disk D, often referred to as Nevanlinna-Pick interpolation. Applications are found for example in systems theory in model-matching and design of digital filters. We focus on reviewing some constructive methods for classical Nevanlinna-Pick interpolation from the Schur class consisting of bounded analytic functions f in the Hardy space H^∞ on D such that $\sup_{z\in D}|f(z)| \leq 1$, minimal-norm interpolation in H^∞, meromorphic interpolation by ratios of finite Blaschke products in D, and unimodular boundary interpolation by Blaschke products and ratios of such on the unit circle.