1077-47-548

Greg Knese* (geknese@bama.ua.edu), University of Alabama, Dept. of Mathematics, Box 870350, Tuscaloosa, AL 35487-0350. Stable symmetric polynomials, the Grace-Walsh-Szego theorem, and the Schur-Agler class.

Two powerful theorems in the study of one variable stable polynomials (polynomials with all zeros outside the unit disk) are the Grace-Walsh-Szego coincidence theorem and the Christoffel-Darboux formula (from orthogonal polynomials on the unit circle). We will present an attempt to unify these results and show how they can help us better understand topics in operator related function theory, namely von Neumann inequalities and rational inner functions in the Schur-Agler class. (Received September 07, 2011)