

Title: Abrahamse's Theorem for Matrix-valued Symbols and Subnormal Toeplitz Completions

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Abstract. In 1976, M.B. Abrahamse obtained a remarkable result in single operator theory, addressing one of P.R. Halmos's famous Ten Problems in Hilbert Space. Abrahamse proved the following theorem:

Let $\varphi \in L^\infty$ be such that φ or its complex conjugate is of bounded type. If T_φ is subnormal, then T_φ is either normal or analytic.

In this talk we will present a complete generalization of this theorem to the matrix-valued case. We will then apply this result to solve a matricial Toeplitz completion problem with Blaschke factors as data.