William Ross, (USA)

Common cyclic vectors for normal operators

For a measure μ in the plane, consider the class S_μ of cyclic multiplication operators on $L^2(\mu)$, i.e., the set of multilication operators M_ϕ such that the symbol is one-to-one on a set of full μ-measure. For what measures μ does S_μ have a common cyclic vector? When μ is a discrete measure, S_μ has a common cyclic vector while if μ has a continuous part, then S_μ does not. When μ has a continuous part, what is a natural subset of S_μ that has a common cyclic vector. This is recent joint work with Warren Wogen.