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Daniel P. Bossaller* (dbossaller@jcu.edu) and **Sergio R. López-Permouth**

(lopez@ohio.edu). *The Toeplitz-Jacobson Algebra is not Spanned by Strongly Regular Elements.*

The algebra $\mathcal{T} = K\langle x, y \mid xy = 1 \rangle$ was introduced by Jacobson in during his investigation of elements which are one-sided invertible. Since then, the so-called “Toeplitz-Jacobson” algebra has been widely studied because it fails to be directly finite, in other words, $\mathcal{T} \simeq \mathcal{T} \oplus B$ as left \mathcal{T} -modules for some nonzero module B . A recent paper by López-Permouth and Pilewski showed that \mathcal{T} does not have a basis consisting solely of invertible elements. Moore, López-Permouth, Pilewski, and Szabo called algebras which have a basis of units “invertible.” In this talk, we will generalize this result by first outlining Jacobson’s embedding of \mathcal{T} into the ring of row and column finite matrices, then show that in general, an element $a \in A$ is strongly regular if and only if there exists a unique idempotent element e such that a is invertible in the corner algebra eAe . Finally we will show that $y \in \mathcal{T}$ cannot be written as the span of strongly regular elements. This is joint work with Sergio R. López-Permouth. (Received September 18, 2018)