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ACCEPTED ELASTICITY OF SEMIGROUP RINGS

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Abstract of Talk: In a commutative, cancellative, atomic monoid M , the elasticity of a non-unit x is defined to be $\rho(x) := L(x)/l(x)$, where $L(x)$ is the length of the longest factorization of x into irreducibles and $l(x)$ is the length of the shortest. The elasticity $\rho(M)$ of the monoid is given as the supremum of the elasticities of the nonzero non-units in M . We say that M has accepted elasticity if there exists an element $x \in M$ such that $\rho(x) = \rho(M)$. This talk will examine semigroup rings, a particular class of submonoids of the multiplicative monoid of the polynomial ring $K[x]$, and show that they have accepted elasticity.