

Twenty Years of Factorization Theory in Numerical Semigroups

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Abstract: The study of non-unique factorizations in monoids has its roots in the study of factorization properties of algebraic number rings that first appeared almost 70 years ago. It was not until the early 2000's that this study was expanded to the rich area of numerical monoids. Since the first basic results on the elastic properties of numerical semigroups, significant work in this area has been completed by several dozen authors. In this talk, we will review many of these results, with an emphasis on the following areas 1) elasticity and its related properties; 2) delta sets; 3) sets of lengths; 4) the omega function; 5) the catenary and tame degree. We offer a list of open problems to demonstrate that work in this area is far from completed.