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**Nathan Kaplan\*** (nkaplan@math.uci.edu). *Families of Numerical Semigroups: Kunz Coordinates and Semigroup Trees.*

A numerical semigroup  $S$  is a submonoid of  $\mathbb{N}_0 = \{0, 1, 2, \dots\}$  such that its set of gaps,  $G(S) = \mathbb{N}_0 \setminus S$ , is finite. Every numerical semigroup has a unique minimal generating set. We will discuss questions relating minimal generating sets and sets of gaps, including a 1978 conjecture of Wilf and a recent conjecture of Pflueger. The focus of this talk will be on how the relevant quantities change as we move through families of numerical semigroups. We will investigate the tree of all numerical semigroups containing a given positive integer  $m$ . We will also consider the identification of a numerical semigroup with its Kunz coordinate vector, a way of representing a semigroup containing  $m$  with a point in  $\mathbb{N}_0^{m-1}$ . We will not assume any previous familiarity with numerical semigroups. (Received January 28, 2019)