ON NON-HOMOGENEOUS PATTERNS ON NUMERICAL SEMIGROUPS

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ABSTRACT. A numerical semigroup Λ is a subset of the non-negative integers $\mathbb{N}_0$ that contains 0 and is closed under addition, and such that $\mathbb{N}_0 \setminus \Lambda$ is finite. Patterns on numerical semigroups are multivariate polynomials such that evaluated at any decreasing sequence of elements of the semigroup give integers belonging to the semigroup. For their simplicity, and for their inspiration in Arf semigroups, patterns were first defined to be linear and homogeneous. However, other families of numerical semigroups have appeared lately in very different areas of applied mathematics which satisfy linear non-homogeneous patterns. In this contribution we give some results on non-homogeneous linear patterns.

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