ALGEBRAIC DEGREES FOR ITERATES OF MEROMORPHIC SELF-MAPS OF $\mathbb{P}^k$

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Abstract

We first introduce the class of quasi-algebraically stable meromorphic maps of $\mathbb{P}^k$. This class is strictly larger than that of algebraically stable meromorphic self-maps of $\mathbb{P}^k$. Then we prove that all maps in the new class enjoy a recurrent property. In particular, the algebraic degrees for iterates of these maps can be computed and their first dynamical degrees are always algebraic integers.