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Conditions d'existence d'une loi de Hardy-Weinberg périodique dans des populations sélectivement neutres. **(French. French summary)** **[Conditions for the existence of a periodic Hardy-Weinberg law in selectively neutral populations]**

Nonassociative algebra and its applications (*São Paulo*, 1998), 439–446, *Lecture Notes in Pure and Appl. Math.*, 211, *Dekker*, *New York*, 2000.

Let K be an infinite commutative field, $\mathrm{char}(K) \neq 2$. A weighted commutative K-algebra A is called a mutation algebra if there exists a K-linear mapping $M\colon A \to A$ such that

$$xy = \frac{1}{2}(\omega(x)M(y) + \omega(y)M(x))$$

with $\omega \circ M = \omega$, where $\omega\colon A \to K$ is a nonzero algebra morphism called a weighting. For $x \in A$, let $x^{[1]} = x$, $x^{[k+1]} = x^{[k]}x^{[k]}$, $k \geq 1$. A weighted K-algebra (A, ω) is said to be Bernstein of order n and period p if, for all $x \in A$, $x^{[n+p+1]} = \omega(x)^{2^n(2^p-1)}x^{[n+1]}$.

The authors study the periodicity of mutation algebras and give a complete classification of mutation algebras that are periodic Bernstein. In so doing, they establish other results, such as a characterization of isomorphic mutation algebras.

{For the entire collection see MR1751123 (2001a:17002)}

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