An embedding for the E_2-term of the Adams spectral sequence

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Abstract

The mod(2) Steenrod Algebra $\mathfrak{A}$ is a quotient of the universal Steenrod algebra Q, the homogeneous quadratic algebra of cohomology operations of H_∞-ring spectra introduced in [10]. We consider a quadratic linear algebra Q_1 obtained by suitably changing the genrators of Q in order to make the quotine $\pi : Q \to \mathfrak{A}$ a map of augmented algebras. It turns out that the map introduced on cohomology is a monomorphism. We also compute $Ext_{Q_1}(F_2, F_2)$ under a hypothesis of koszulness on Q.

[10] J.P. May:" A general algebraic approach to Steenrod operations. The Steenrod algebra and its applications", *lecture Notes in Math*, Vol. 168, Springer, Berlin, 1970, 153–231.