

Algebras whose Tits form accepts a maximal omnipresent root

José A. de la Peña, Andrzej Skowroński

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Let k be an algebraically closed field and A be a finite-dimensional associative basic k -algebra of the form $A=kQ/I$ where Q is a quiver without oriented cycles or double arrows and I is an admissible ideal of kQ . We consider roots of the Tits form q_A , in particular in case q_A is weakly non-negative. We prove that for any maximal omnipresent root v of q_A , there exists an indecomposable A -module X such that v is the dimension vector of X . Moreover, if A is strongly simply connected, the existence of a maximal omnipresent root of q_A implies that A is tame of tilted type.

Subjects: **Representation Theory (math.RT)**; Rings and Algebras (math.RA)

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