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Supplements and Corrections to my paper ; "On Algebras of Bounded Representation Type"

By Tensho YOSHII

In the present paper we give supplements and corrections to the paper mentioned in the title. We abbreviate this paper by [A].

Supplements

In [A] we showed the proof of the "if" part of Theorem 2 in outline because it was quite long but we are afraid that it is too rough to be understood. Therefore in this supplements we shall show it in some detail and moreover we are going to clear the proof of my paper [1].

1) Let A be an associative algebra over an algebraically closed field k, N its radical and $\sum_{\kappa}\sum_{\lambda} Ae_{\kappa,\lambda}$ the direct decomposition of A into directly indecomposable left ideals where $Ae_{\kappa\lambda}\cong Ae_{\kappa 1}=Ae_{\kappa}$. Moreover we assume that $N^2=0$ and A is the basic algebra.

If Ne, where e is a primitive idempotent, is the direct sum at most two simple components an A-left module $\mathfrak{m}=\sum_i Aem_i$ is the direct sum of direct components of the type Aen_i. Next if $Ne=\sum_{i=1}^{3} Au_i$ an A-left module $\mathfrak{m}=\sum_i Aem_i$ is the direct sum of direct components of the following types;

(1) Aen_i

(2) Aen_j+Aen_{j+1} where $u_1n_j\neq 0,\ u_2n_j=0,\ u_3n_j=u_3n_{j+1},$
$u_2n_{j+1}\neq 0,\ u_1n_{j+1}=0.$

These proof was shown in detail in [A]. Hence we shall use these results without proof.

Now let $\mathfrak{m}=\sum_i\sum_{\lambda_i} Ae_im_{i,\lambda_i}$ be an arbitrary A-left module and $\{Ne_1, \cdots, Ne_r\}$ be a chain of A. From the results of [A], we have to prove it in the following four cases: