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# ON FREE ASSOCIATIVE ALGEBRAS WITH ADDITIONAL ACTION

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## ABSTRACT

It is a well known result of Emmy Noether [4, 5] that the algebra of invariants of the polynomial algebra in  $d$  commuting variables under the action of finite group  $G$  is finitely generated. In the noncommutative case, this is only true for finite groups, consisting of scalar matrices. However, equipped with an additional action, defined by Koryukin in [R5], the algebra of invariants of polynomials in  $d$  non commuting variables becomes finitely generated. In [1, 2] we study the invariants of free associative algebras under the action of fixed finite groups.

**Keywords** Free associative algebras · Noncommutative symmetric polynomials · Finite generation · Koryukin action

## References

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