

The Nullstellensatz for supersymmetric polynomials

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This paper gives a proof of conjecture 13.5.1 from [M]. The result gives a geometric interpretation of maximal ideals in the algebra of supersymmetric polynomials and can be thought of as an analog of the weak Nullstellensatz. There is also a version of the strong Nullstellensatz. This gives a bijection between radical ideals and algebraic sets which are invariant under the Weyl groupoid of Sergeev and Veselov, [SV]. Note that the algebra of supersymmetric polynomials is not Noetherian, so the usual Nullstellensatz does not apply.

References

- [M] I. M. Musson, *Lie Superalgebras and Enveloping Algebras*. Graduate Studies in Mathematics Vol. 131. Amer. Math. Soc., Providence, RI, 2012.
- [SV] A. N. Sergeev and A. P. Veselov, *Grothendieck rings of basic classical Lie superalgebras*. Ann. of Math. (2) 173 (2011), 663-703.