Mathematics > Algebraic Geometry

Higher secants of spinor varieties

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Let S_h be the even pure spinors variety of a complex vector space V of even dimension $2h$ endowed with a non degenerate quadratic form Q and let $\sigma_k(S_h) $ be the k-secant variety of S_h. We decribe a probabilistic algorithm which computes the complex dimension of $\sigma_k(S_h) $. Then, by using an inductive argument, we get our main result: $\sigma_3(S_h) $ has the expected dimension except when $h\in \{7,8\} $. Also we provide theoretical arguments which prove that S_7 has a defective 3-secant variety and S_8 has defective 3-secant and 4-secant varieties.

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