

1035-14-607

Giorgio Ottaviani* (ottavian@math.unifi.it), Dipartimento di Matematica, viale Morgagni 67/A, I-50134 Firenze, Italy. *Secant varieties of Grassmann and Segre varieties.*

We report about joint work with H. Abo and C. Peterson. We develop an inductive procedure in order to find the dimension of the higher secant varieties to Grassmann and Segre varieties, in a range which is asymptotically sharp. This corresponds to find the minimum number of terms in which a general (skew-symmetric) tensor can be written as a sum of decomposable ones. In the symmetric case this problem was solved in 1995 by J. Alexander and A. Hirschowitz, and it is known as the Waring problem for polynomials. (Received September 12, 2007)