1057-14-139   **Enrico Carlini*** (`enrico.carlini@polito.it`), Dipartimento di Matematica, Politecnico di Torino, Turin, Italy. *Bipolinomial Hilbert functions.*

Given a closed subscheme X we let $HF(X,-)$ and $hp(X,-)$ denote, respectively, the Hilbert function and the Hilbert polynomial of X.

We say that X has bipolynomial Hilbert function if $HF(X,d) = \min\{hp(P^n,d), hp(X,d)\}$ for every non-negative integer d. Hence, schemes with a bipolynomial Hilbert function have, in some sense, the expected behaviour.

Finite set of points in generic position are known to have bipolynomial Hilbert functions. The same holds for a finite collection of generic lines. But, in general, it is not known whether a finite collection of generic linear spaces has a bipolynomial Hilbert function.

We will introduce non-trivial examples of schemes with bipolynomial Hilbert functions providing evidence for our conjecture about "small" configuration of linear spaces.

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