1018-13-109   **Susan Marie Cooper*** (`sucooper@math.syr.edu`), Mathematics Department, 215 Carnegie
Building, Syracuse University, Syracuse, NY 13244-1150. *The Lex-Plus-Powers Conjecture for
Points.*

A characterization of which sequences of numbers can be the Hilbert function of a finite set of distinct points in $\mathbb{P}^n$ follows
from the work of Macaulay, Hartshorne, and others. In this talk we will apply the combinatorial results of Clements-
Lindström and Greene-Kleitman to give a similar characterization of Hilbert functions of point sets which are subsets of
certain complete intersections. We will see that the problem in general is connected to the Lex-Plus-Powers Conjecture
of Eisenbud-Green-Harris. As an application, we will see that certain subsets of complete intersections are guaranteed to
have the Cayley-Bacharach Property. (Received March 01, 2006)