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Paolo Mantero*, pmantero@uark.edu. *The interpolation problem for star configurations.*

The (homogeneous) interpolation problem for a set X of points in projective space asks to determine (for any d and m) the number of linearly independent equations in degree d passing through X at least m times. The problem is in general extremely challenging, even for general points in \mathbb{P}^2 .

In the present talk we determine the structure of all symbolic powers of all star configurations (of hypersurfaces) and compute all their graded Betti numbers. In particular, this solves the interpolation problem for this class of sets of points.

Along the way, we prove that star configurations of hypersurfaces have c.i. quotients, and use combinatorial computations to prove an explicit formula for part of their graded Betti numbers. (Received February 03, 2020)