1104-14-290 **Jimmy Shan*** (shan15@uiuc.edu), 1409 W Green, Urbana, IL 61801. *Powers of linear forms and splines.*

I will talk about the algebraic approach to spline theory. This approach leads naturally to a class of ideals of powers of linear forms. In the case of splines on tetrahedral complexes, Macaulay Inverse System relates these ideals to another class of ideals of fat points on the projective space. The Hilbert function of these fat points leads to a formula for the dimension of the vector spaces of such splines. (Received September 03, 2014)