

DREXEL ANALYSIS SEMINAR

October 4, 2013

3-3:50 PM, Korman 245

Speaker: Patrick Clarke

Title: Splines and their Moduli

Abstract: We present recent results showing that the set of subdivisions of \mathbb{R}^n which give spline functions of a given smoothness and of a given dimension at each degree bound form an algebraic variety. Furthermore, this variety has a natural compactification if one considers supersplines and prescribed asymptotic behavior.

The existence of this variety sheds light on the study of spline functions and suggests new applications to problems in which one wishes to find an “optimal” subdivision.

Analogous varieties have also been shown to exist for a huge class of geometric objects.