Mathematics, Statistics, and Computer Science   **@ UIC**

Algebraic Geometry Seminar

Interpolation and vector bundles on curves

Atanas Atanasov (Citadel)

Abstract: We aim to address the following: When is there a (smooth) curve of degree d and genus g passing through n general points in $\mathbb{P}^r$. Generalizations ask for the dimension of such curves, or replace the point incidence conditions with higher dimensional linear spaces. We will start by relating these statements to a property of the normal bundle of curves in projective space. Next, we will show how to address these questions for r = 3 and d >= g + 3. The demonstrated techniques generalize significantly and lead to an answer to our question for d >= g + r. This is joint work with E. Larson and D. Yang.

Wednesday, February 10 at 4:00 PM in SEO 427