

**Speaker:** Enrico Carlini  
Politecnico di Torino - Italy

Tuesday, November 2, 2010  
2:00 pm  
125 Hayes-Healy Hall

**Title:** Star configuration points and plane curves

**Abstract:**

If we take a family of  $m$  lines in projective two-space, their pairwise intersection points form a set, say  $X(m)$ . The set  $X(m)$  is called a star configuration set of points and, if the lines are generic enough, consists of  $\binom{m}{2}$  points. Star configuration sets of points are of course special because of their construction. Nevertheless, they have the same Hilbert function as a generic set of points of the same cardinality. For these reasons, star configuration sets of points are useful tools. In a work with A. van Tuyl (Lakehead University, Ontario) we investigated another property of star configuration sets of points. Namely, for which  $d$  and  $m$  does a generic degree  $d$  curve contain a set of points  $X(m)$ ? In this talk I will present our results and the techniques we used. I will also try to show some results in higher dimension which are contained in an ongoing project with A. van Tuyl and E. Guardo (University of Catania, Italy)