



Speaker: Juan Migliore
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Monday, September 3, 2012
4:15 PM
231 Hayes-Healy Hall

Title: A modern algebraic view of a classical geometric result

Abstract:

Pascal's theorem says that if a hexagon is inscribed in a conic, the three points of intersection of pairs of opposite sides of the hexagon are collinear. This turns out, in the end, to be a simple but surprising application of a modern algebraic theory (liaison theory). We'll start off looking at how many points we expect two plane curves to meet in, look at a result about cubic curves commonly called the Cayley-Bacharach theorem but actually due to Chasles, and then apply this to Pascal's situation. Then we'll see how Chasles' theorem is a special case of "the Hilbert function for linked sets of points," and see that results of that sort are easy to obtain.