

# B I - C O M A T H E M A T I C S C O L L O Q U I U M

**Antonella Grassi**  
University of Pennsylvania

*“Noether-Lefschetz loci  
and polytopes”*

**Monday, April 28, 2014**

Talk at 4:00 – Park 338  
Tea at 3:30 – Park 355, Math Lounge

**Abstract:**

I will talk about algebraic curves and surfaces in the 3-dimensional (projective) space, that is zero loci of homogeneous polynomials. Under good conditions, any curve on a smooth surface in the 3 dimensional space can be obtained by intersecting the surface with another surface. The surfaces in the projective space which do not satisfy these good conditions are in "the Noether-Lefschetz locus", which was characterized about 30 years ago. I will then discuss curves and surfaces in toric 3 dimensional spaces and the relation to the combinatorics of polytopes.

**BRYN MAWR COLLEGE**