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

Departmental Colloquium

1. On moduli problems and Higgs bundles, 2. If it's not a manifold, then what is it?

1. Laura Schaposnik, 2. Kevin Tucker (UIC)

Abstract: This is a special Open House Colloquium aimed at our regular faculty and students and at the prospective students considering to join our graduate program. The Colloquium will consist of two talks above.

L. Schaposnik: Moduli spaces may be thought of as geometric solutions to geometric classification problems. Along the talk we shall first introduce these type of problems by working through some toy examples: by considering the moduli space of lines we will understand how lines may be classified, how line bundles can be obtained, and finally how to define Higgs bundles.

K. Tucher: It's a fact of life – even if you're only interested smooth geometric objects, they tend to degenerate to singular (read: non-manifold) ones. In this talk, I'll try to give an idea what some singular algebraic varieties really ''look like.'' This will lead us to a discussion of invariants of singularities and some topics of current research.

Tea at 4:15 PM in 300 SEO

Friday, March 4 at 3:00 PM in SEO 636