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

Algebraic Geometry Seminar

The stable cohomology of moduli spaces of sheaves on surfaces

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Abstract: Moduli spaces of Gieseker semistable sheaves on surfaces play a central role in mathematics and have many applications to cycles and linear systems on surfaces, Donaldson's 4-manifold invariants and mathematical physics. In this talk, I will describe a conjecture with Matthew Woolf on the cohomology of these moduli spaces. We conjecture that the Betti numbers of these moduli spaces stabilize as the discriminant tends to infinity and that the stable numbers are independent of the rank and the first Chern class. In particular, calculations of Gottsche determine the stable numbers. I will give some evidence for the conjecture. This is joint work with Matthew Woolf.

Wednesday, January 23 at 4:00 PM in 427 SEO