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

Graduate Algebraic Geometry Seminar

Brill-Noether-Petri without degenerations

Jay Kopper (UIC)

Abstract: The Brill-Noether theorem describes the number of maps a general smooth curve admits to projective space of given degree. A complete proof was given by Griffiths-Harris in 1980, building on work of Kleiman-Laksov and others. In 1982, Gieseker gave a proof of Petri's conjecture, a strictly stronger result. The proofs of these theorems require very delicate manipulations of transverse intersections and degenerations to special (reducible!) curves in the boundary of the Deligne-Mumford compactification of the moduli space. In 1986, Lazarsfeld gave a comparitively simple proof of the Gieseker-Petri theorem by explicitly constructing curves on K3 surfaces. In this talk I will describe the relevant background and give an overview of Lazarsfeld's proof.

Wednesday, February 6 at 3:00 PM in 712 SEO