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

Algebraic Geometry Seminar

Brill–Noether theory over the Hurwitz space

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Abstract: Let C be a curve of genus g. A fundamental problem in the theory of algebraic curves is to understand maps of C to projective space of dimension r of degree d. When the curve C is general, the moduli space of such maps is well-understood by the main theorems of Brill–Noether theory. However, in nature, curves C are often encountered already equipped with a map to some projective space, which may force them to be special in moduli. The simplest case is when C is general among curves of fixed gonality. Despite much study over the past three decades, a similarly complete picture has proved elusive in this case. In this talk, I will discuss joint work with Eric Larson and Isabel Vogt that completes such a picture, by proving analogs of all of the main theorems of Brill–Noether theory in this setting.

Monday, April 12 at 3:00 PM in Zoom