

Algebraic Geometry Seminar

A refined Brill-Noether theory over Hurwitz spaces

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Abstract: The Brill-Noether theorem describes the maps of general curves to projective space. Recently, the Brill-Noether theory of general k -gonal curves C has gathered much interest: Coppens-Martens exhibited components of the Brill-Noether loci $W^r_d(C)$ with different dimensions; work of Pflueger and Jensen-Ranganathan determined the dimension of the largest component. In this talk, I will introduce a natural refinement of Brill-Noether loci for curves with a distinguished map $C \rightarrow \mathbb{P}^1$, using the splitting type of push forwards of line bundles to $\mathbb{P}^1$. In particular, studying this refinement determines the dimensions of all irreducible components of $W^r_d(C)$ for general k -gonal C .

Monday, September 16 at 4:00 PM in 427 SEO