

Monodromy problems in Brill--Noether theory

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The classical Brill--Noether theorem computes the dimension of the locus of degree d line bundles on a general genus g curve that have at least an $(r+1)$ -dimensional space of sections. When this dimension is 0, the universal such locus is a generically finite cover of M_g , and gives rise to an interesting monodromy problem! When the curve is not general, the statements of the classical Brill--Noether theorem can fail. I will discuss recent joint work with Eric Larson and Hannah Larson on the Brill--Noether theory of curves equipped with a fixed map to P^1 , and the associated monodromy problem.