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Eric Larson, Hannah Larson and Isabel Vogt* (ivogt.math@gmail.com). *Brill–Noether theory over the Hurwitz space.*

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 Hannah Larson that completes such a picture, by proving analogs of all of the main theorems of Brill–Noether theory in this setting. (Received January 09, 2022)